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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2006

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HUNGARIAN GOODS EXCHANGE WITH CEMA COUNTRIES IN 1980

Budapest FIGYELO in Hungarian No 13, 26 Mar 80 p 7

[Article: "This Year's Exchange of Goods ith Socialist Countries"]

[Text] Nearly a half of Hungary's international exchange of goods is being conducted through ruble accounting, and with socialist countries. In last year's ruble accounting trade, calculated in current prices and in forints, exports increased by 8.1 percent and imports by 5.9 percent. The volume data differs to a small extent--import amounts increased by 4 percent and exports by 9 percent. This year's national economy plan--based on long range pacts and their scope broadening agreements--is providing for a 5-6 percent volume increase in imports, along with approximately the same rate of increase for exports.

Chief Trends

The formation, development and, to a lesser extent, merchandise composition of the 1980 ruble accounting trade are being greatly influenced at several points by the projections and goals of this year's national economy plan. The imports of natural gas and electrical energy are increasing at a rapid rate, while those of chemical and light industry products are also growing. Increase in metallurgical imports in unlikely, since product exchange in this area is decreasing. Moreover, the same holds good for imports of machinery industry capital goods, the solvent requirements of which, affected by the planned decrease in domestic investment activities, are expected to be reduced. In ruble accounting exports, whose pace, for the most part, is comparable to that of imports, the increasing exports primarily of machinery, chemical products, agricultural and food industry products will have a decisive role.

The 1980 Hungarian-Bulgarian trade protocol projects a mutual goods exchange worth nearly 200 million rubles. This surpasses the projection of the long range pact by nearly 10 percent, but, compared to the actual 1979 trade, means only a few percent increase. (Last year, calculated on current prices, imports increased by nearly 9 percent, and exports by more than 40 percent.)

This year again, machine industry products are comprising the heart of the mutual trade. Hungary is purchasing nearly 80 percent of the imported material moving machinery from Bulgaria. For these, appropriate quantities of spare parts--16 million rubles worth--are being delivered in 1980. Computer technology instruments and motor vehicle industry shipments occupy important positions in the mutual machinery trade. Hungary exports articulated buses, major bus components and spare parts to Bulgaria, and imports Bulgarian batteries, smaller unit components and cables. Additional items in Hungarian machinery exports are machine tools, agricultural, food industry and catering industry machinery and electronic spare parts.

The pharmaceutical goods exchange--the mutual delivery of prepackaged pharmaceuticals and ingredients--will have an 8 million ruble share in this year's trade. An important factor in the import, especially from the Hungarian standpoint, is 100,000 tons of calcinated soda, which is partial payment for the Hungarian share of the Devnya Chemical Complex's investment. Fresh fruit, canned fruit and vegetables, tobacco and cigarettes continue to figure in the import without change. This year Bulgaria has a new export item--the contract to construct one million rubles worth of apartments in Hungary.

Machine Industry Cooperations and Specializations

Hungary and Czechoslovakia are planning to have more than one billion rubles worth of trade this year. The trade rate increase is slight, a total of four percent. (In 1979, the value of Hungarian imports increased by 2.7 percent, the value of exports by nearly 25 percent.) Machinery industry products comprise about 57 percent of Hungarian export and nearly 60 percent of the import. Two-fifths of machinery deliveries are based on cooperative and specialization agreements. The motor vehicle industry, whose 1980 trade projection is exceeding 100 million rubles, has the cooperation with the largest volume and value. Hungarian exports consist of chassis and articulated buses, while Czechoslovak deliveries consist of trucks, specialized motor vehicles and spare parts. New products with which the mutual machinery trade is broadening include mobile paint sprayers, which Hungary is exporting for the first time in 1980, and complete agricultural laboratories. New import items this year are four-axled freight cars, rapid scales and intercoms.

The role of consumer articles is considerable--13-14 percent of the mutual trade. Hungarian export articles are furniture, knit and leather goods and parmaceuticals. We are importing 10,000 automobiles, 34,000 mopeds and motorcycles, as well as electric and electronic household appliances from Czechoslovakia. The construction exchange is also continuing with Hungarian construction in Czechoslovakia and Czechoslovak enterprises participating in transportation investments. Traditional basic material and semifinished product deliveries comprise nearly 30 percent of our imports and approximately 20 percent of our exports in the more than one billion ruble trade.

The Hungarian-Polish exchange of goods agreement for this year is projecting a 700 million ruble trade, which exceeds the 1980 projection of the long range pact by nearly 10 percent. Last year the mutual deliveries did not develop as planned. Imports decreased to a lesser degree, and the value of exports increased by approximately 13 percent.

Almost a third of the goods exchange consists of raw materials, semi-finished products and spare parts. Traditional Hungarian shipments consist of bauxite, aluminum oxide, bulk aluminum and motor vehicle spare parts, while the most significant Polish deliveries are hard coal, coke, sulphur and salt. Mutual shipment of chemical industry products forms a considerable portion of this merchandise group.

Vehicle industry cooperation is also an important component of Hungarian-Polish machinery trade. On the Hungarian side, it consists of deliveries of autobuses, rear axle spare automobile parts, while the Poles ship various motor vehicles and spare parts. This year again, Hungary is shipping in truments, communications technology products and computer technology equipment, while at the same time importing road building machinery, railway passenger cars and computer technology equipment.

Although the construction of the Kaba sugar plant has been completed, the Polish construction industry is continuing its export activities into Hungary. This year again it is partaking in several important investments and implementation efforts, such as the Berend calcium hydrate plant, the Szabadegyhaz sugar factory and the Paks nuclear power plant.

Materials Products

The GDR is Hungary's second largest foreign trade partner in the ruble accounting trade. The Hungarian-GDR exchange of goods fulfills an important role in the satisfaction of both producers and consumers. Last year the trade developed unevenly--Hungarian export values increased by 13 percent while the value of imports decreased. The protocol signed for 1980, which projects trade worth 1.35 billion rubles, barely exceeds that of last year. The development of the trade projection was affected in part by the decrease in Hungarian machinery import needs--machinery still comprises almost 60 percent of the trade--and in part by the partner nation's expectation of better harvest yields and the consequent desire to reduce agricultural product imports.

Mutual machinery shipments comprise nearly 900 million rubles out of a total trade value of more than 1.3 billion rubles. Hungarian machinery export, with its nearly eight percent increase slightly exceeds 400 million rubles. One quarter of this is made up of vehicle industry products including 1,350 buses, specialized trucks, spare parts, unit parts and service equipment. Another 12-13 percent is composed of agricultural machinery and unit parts. These two product groups are in similar proportion and of similar importance in machinery imports. GDR's motor

vehicle shipments contain 8,000 trucks, 580 small buses, 23,000 Trabant and 16,500 Wartburg automobiles and more than 40 million rubles worth of spare parts. Deliveries deriving from cooperations and specializations make up nearly 30 percent of the trade traffic. Of this, motor vehicle cooperation represents a value of 275 million rubles.

In most merchandise groups, trade volume is remaining similar to that of last year. In material-like products, Hungary is exporting bauxite, aluminum oxide, bulk aluminum and aluminum semifinished products, while the GDR is exporting cement, potassium fertilizers, soft coal, compressed slack and various chemical products.

The exchange of goods between Hungary and the GDR is fulfilling an important role in the satisfaction of consumer requirements in both countries. In this regard, noteworthy are the Hungarian foodstuffs exports--grain, salami, canned meats, fresh vegetables and fruit, wine and champagne--and the consumer goods import from the GDR. The value of the selection exchange in domestic trade products is also significant. This year Hungary is importing 21,000 traditional and automatic washing machines, radios, record players, articles of clothing, household textiles and furniture.

Last year, Hungarian-Romanian goods exchange increased by approximately 15 percent and surpassed 400 million rubles for the first time. This year's goods exchange protocol projects barely a two percent increase in trade to 408 million rubles. Raw materials, semifinished products and spare parts comprise nearly 40 percent of the mutual trade. This year we are importing 200 million cubic meters of natural gas, 500,000 tons of salt, 45,000 tons of caustic lye, 150,000 truck tires and large amounts of building materials and chemicals. Our more significant exports in this merchandise group are aluminum oxide, aluminum and rolled merchandise.

In the machinery products trade, the proportionate values of diesel public conveyances and unit parts, on the Hungarian side, and of railway freight cars, on the Romanian side, are significant. The proportion of goods manufactured under cooperative and specialization agreements is low.

Five Billion Rubles

This year's Hungarian-Soviet goods exchange projection is more than 5 billion rubles, and compared to last year, will make a nearly 5 percent increase possible. We are importing 7.5 million tons of petroleum, 3.8 billion cubic meters of natural gas, 800,000 tons of coke, 7.5 billion kw hours of electricity, 2.2 million tons of iron ore, 1.1 million cubic meters of industrial wood, 850,000 tons of pine lumber, 44,000 tons of wool, 80,000 tons of cellulose, 70,000 tons of paper and the same quantity of cardboard from the Soviet Union this year. More than two-thirds of the import--as in previous years--consists of energy resources, raw materials, semifinished products and spare parts. The more significant entries in this year's imports of investment and consumer goods, which comprises

nearly one-third of the import's merchandise structure, are: 20 motor cars and several escalators for subway development, continued machinery and equipment deliveries for in-progress investments, 45,000 Lada automobiles, portable television sets, vacuum cleaners, bicycles, refrigerators, household sewing machines and automatic washing machines.

Most of the Hungarian export consists of machinery, consumer goods and agricultural products. Hungarian enterprises are exporting nearly 6,000 buses, 410,000 Lada component ports, machine tools, energetics equipment and floating cranes, as well as communications technology equipment for the Olympic project of the Soviet capital city. The goods exchange protocol projected exports of clothing worth 138 million rubles, of pharmaceuticals worth 120,000 million rubles, and 12 million pairs of shoes. Again in 1980, Hungary is delivering significant quantities of meat, 300,000 tons of fruit and 65 million bottles of wine.

In the accounting for the majority of their intermember trade, CEMA nations use transferable rubles. However, there also exists trade with free foreign currency accounting. Trade arrangements above the quotas are generally accounted in convertible foreign currency. Foreign trade carried on with Yugoslavia, which participates in CEMA cooperation, is carried on with this accounting method. (For this reason the ruble accounting trade and the share of the trade carried on with socialist nations are at variance in Hungarian foreign trade statistics.)

By the 1976-1979 time period, the value of Hungarian-Yugoslav goods exchange--partly because of the inflation of the dollar--already reached the 1.5 billion dollars projected for five years. The 1980 agreement projected the value of this year's trade to be 525 million dollars, which surpasses the 1979 figure by 15 percent. The projection for the exchange of services is nearly 150 million dollars.

Nearly 30 percent of the goods exchange is derived from vehicle, cellulose and artificial fertilizer industry cooperations. Of the mutual deliveries, the share of machine industry products is 30 percent, those of chemical and petroleum industry products 20 percent, and the share of metallurgical products is 15 percent. The majority of the service exchange consists of the shipment of goods. More than a half of Hungary's overseas trade is carried on through Yugoslav railroads and harbors. Yugoslavia likewise utilizes the haulage of the Hungarian railroads. This year the service traffic is augmented by gas and oil shipping.

Balance Situation Also Affected

The trade projections of the goods exchange protocols ratified for 1980 with European CEMA countries and Yugoslavia individually and collectively are surpassing the planned trade value for 1980 contained in the 1976-1980 long range agreements. This kind of overfulfillment was also characteristic of the last plan period. In this case, however, the role of foreign

trade price increases and the rise in the price levels cannot be ignored in calculating the increase in trade value.

In recent years numerous factors influenced the development and orderliness of trade. Almost at the same time, every CEMA country made the vigorous enhancement of its dollar accounting exports its goal. This endeavor and the already existing high import levels also altered the relative structure of their foreign trade. Previously, temporary uncertainties in the ratification of contracts were generally discernible only during the transition betwwen mid range plan periods--until the new five-year plans were finalized. Recently, however, the drawn out price negotiations and the modification of a wide range of prices are also having the same effect.

During this plan period, and especially in the most recent years, the order and implementation of trade have been impaired, and have been made more difficult by the deepening tensions in traffic and transportation. The limited opportunities for railway hauling hindered primarily the transfer of bulk merchandise--raw materials and agricultural products. The implementation of export and import traffic in a manner close to the plan and in harmony with each other--this was characteristic of 1979--cannot ease the tensions of foreign trade merchandise transportation, because the partners must supplement mutual shortcomings from other sources, usually from developed capitalist countries.

For years, and in 1980 also, national economy plans have placed the balance situation, and within this, primarily the balance improvement of the non ruble accounting foreign trade, in the position of primacy. In harmony with this, the concentration and the efforts are generally in this direction. It is proper, and in fact timely and necessary, to emphasize that the task of improving the balance situation has indeed increased the value of and intensified the significance and roles of the goods exchange and the economic relationships with socialist countries. It is hardly necessary to prove in detail that the purposefulness of the socialist goods exchange traffic and the total fulfillment of our import and export projections are indispensable conditions for improving the balance situation.

9093
CSO: 2500

LEIPZIG TRADE FAIR SEEN REFLECTION OF CEMA COOPERATION

East Berlin NEUES DUETSCHLAND in German 13 Mar 80 p 6

[Article by Hans Kaemmerer: "Successful Integration in the Foreground of Production; Leipzig Trade Fair Offers Numerous Cooperative Products of Socialist Countries"]

[Text] What the Leipzig Trade Fairs have already shown in the past years is becoming even clearer this year: the advantages and results of socialist economic integration. There have been increasing indications at the fair exhibits that top achievements have resulted from specialization and cooperation through joint research work. In spite of the great quantity of products exhibited, these indications are especially obvious in the GDR industry exhibits, in the Soviet pavilion, and also in the exhibits of other socialist countries. Indications of this kind are even the main characteristics in the profile of one field: the products that have become known as ESER--Unified System of Electronic Computer Technology.

Twelve years ago, the basis for this development was established in a government agreement between the GDR and the Soviet Union on cooperation in the creation of a unified system of electronic data processing systems. In 1969, Bulgaria, Hungary, the GDR, the USSR and the CSSR joined forces in this field. In subsequent years, Cuba and Romania joined the common effort.

There were substantial reasons for this development. Computer technology is proving to be the most important rationalization factor in all socialist countries. Without it the increasingly growing demands on management and planning in the national economy, in cooperatives and firms, in the management of production processes, in scientific work and elsewhere can no longer be met.

New Developments in the Soviet Pavilion

The progress achieved in this development is shown at the Leipzig Fair in many products offering effective solutions to data processing problems. In the Soviet Pavilion there are a number of exhibits showing examples of

new applications of the ESER systems. Of special importance are new peripheral products, among them 100-megabyte interchangeable memory banks and graphic television sets. The most recent developments, for instance the DP systems ES 1060 and ES 1035, are exhibited as models. Specialists from the Soviet production sector are giving expert explanations on their use and rationalization application. Like the Soviet Union, other socialist countries are demonstrating through equipment and systems, in which they have become construction specialists, top-level international products and, at the same time, the advantages of international cooperation. Wherever an ESER partner is exhibiting products at this fair, there is evidence of the degree of this partner's share in the effectiveness of the scientific-technical potential of our countries.

The collective Robotron, founded in the GDR immediately after the government agreement of 1969 and now developer, producer and exporter, shows its ESER products to the public in Hall 15 of the fair grounds. Two new products are especially noteworthy: one, the newly developed type of the K 1600 series produced within the "Systems of Small Computers" (SKB). Its main use is in data processing, in the automization of laboratory and production processes. The other is the very effective data processing system EC 1055.

Top Achievement by Robotron Collective

What socialist integration contributes to preproduction processes is made clear especially in these two GDR top-level products. Because of their high rate of national and international standardization, both systems--ESER and SKR--are fully integrated. They can be hooked up at will. Robotron, for instance, demonstrates at its exhibit how GDR technology is used jointly with the 100 megabyte interchangeable memory banks, with Polish tape recorders and Hungarian printers and folio memory banks.

"What seems here to be a purely technical aspect emerges, however, during closer examination as an important side of socialist integration," stated Horst Giebler, director for research and development of the Robotron collective, Dresden, at his fair exhibit. Precision is necessary especially in joint research, i.e. long before series production. Cooperation during this phase results in important conditions for high quality and effectiveness. Therefore, the collective has close contacts with scientific institutes in the Soviet Union and other socialist countries, primarily on the basis of contractual agreements. "Given the great speed of scientific-technical progress, this is for us an important condition for top-level achievement in the shortest possible time."

The effectiveness of this production method is demonstrated by more examples than can be shown at the fair. Horst Giebler knows from personal experience that scientific-technical cooperation must be understood primarily in terms of demands on personal achievement. The 70,000 workers of the collective have therefore produced in the past four years ESER

technology worth more than M 2.5 billion, and 70 percent of it was exported. The EDP system EC 1040 is operating today in 12 countries with great dependability. In the summer of the past year, the 100th system of this kind produced for the USSR was delivered to the Institute for Oceanology of the USSR Academy of Sciences. GDR EDP technology is also used in the Institute for Nuclear Research in Dubna, in the automobile plant on the Kama, in the Moscow Institute for Atomic Energy, in the CSSR and in Cuba. There is hardly an area in the USSR where tape recorders produced by the collective VEB Carl Zeiss, Jena are not in use.

Favorable Influence on Foreign Trade

On the other hand, importants from the Soviet Union and other socialist countries are of great importance for the use of computer technology in our country. More than 60 percent of the computers installed in the GDR have been imported from socialist countries within the ESER framework. At the head of this list are the proven Soviet systems EC 1020 and EC 1022.

This cooperation was so profitable for all sides that foreign trade in this technology rose almost tenfold between 1971 and 1975. Today, this trade is one of the most important aspects of the trade between the GDR and the USSR, and it will steadily increase in volume and rank from now until 1985.

Almost 12 years after the signing of the agreement, clear facts are evident and measurable in economic terms. Cooperation with the USSR and other ESER partners has developed the character profile of the GDR computer industry. It is the most important basis for its continued successful development.

8889
CSO: 2300

HEAVY INDUSTRY PROMOTES RELATIONS WITH CEMA

Budapest NEPSZABADSAG in Hungarian 2 Apr 80 p 10

[Text] Bilateral and multilateral relations of the Hungarian heavy industry will be further strengthened and widened as a result of the ten inter-governmental agreements concluded with socialist countries last year. This was the conclusion arrived at by the leaders of the Ministry of Heavy Industry during their meeting as they reviewed the situation of the ministry's international relations.

The value of the bilateral deliveries between 1981 and 1985 established in the minutes of the widened Hungarian-Soviet agrochemical agreement will exceed 500 million rubles in each direction. The Hungarian chemcial industry delivers six different types of pesticides, which are reciprocated by our Soviet partners by different synthetic fertilizers, plastics and other basic chemical products. Our domestic detergent production will be helped by deliveries of aliphatic alcohols in exchange for different installations.

The agreement signed on the Hungarian-Bulgarian economical and technico-scientific cooperation for 1981-1985 also strengthens our bilateral relations. According to this agreement, the parties agree to mutual deliveries, specialization of manufacture and cooperation on pesticides, tires and technical rubber products, surface-active and industrial products, as well as drugs.

According to the agreement signed with our Polish partners, exchange of synthetic fibers will continue during the coming years.

Negotiations in the permanent committees for petroleum and gas, coal mining, nonferrous metallurgy, chemical industry and electric power of CEMA were instrumental in promoting the development of multilateral cooperation. Thus, we concluded general multilateral agreements with our Czechoslovak, Polish, East German and Soviet partners regarding the construction of the Chmelnitzk nuclear plant to be built on the territory of the Soviet Union,

and on the joint construction of a 750 kilovolt power transmission line between this important plant and Rzeshov in Poland, similar to the 750 kilovolt power line between Vinnitsa and Albertirsa. We signed a separate transit agreement with our Polish partners, according to which we will receive considerable amounts of electric power from the new nuclear plant via the Polish electric power network. (MTI)

9568
CSO: 2500

BRIEFS

PETROBALTIC OFFSHORE DRILLING PLATFORM--An unusual sea convoy--two ocean-going tugs from the Netherlands and FRG--which registered its arrival at the roadstead of Port Polnocny on 16 April, had towed to Gdansk a large platform for conducting offshore petroleum exploration. The large structure, which is 63 meters long and 34 meters wide, has a draft of 8 meters and is equipped with three 127-meter high spuds, will be utilized by the "Petrobaltic" joint petroleum exploration organization in the Baltic Sea. This organization includes the USSR, GDR and Poland. The platform was constructed in the specialized shipyards in Rotterdam. The purpose of the platform is only to conduct exploration operations on the sea floor. The sea-going structure purchased by "Petrobaltic," in addition to the spuds which provide the capability of placing it on the sea floor at a depth of 90 to 100 meters, is also provided with a helicopter landing pad, a drilling tower, complete salvage gear, living quarters for a 70-man crew, exploration equipment, power-generating systems and storage tanks for fuel and drinking water. [Text] [Warsaw TRYBUNA LUDU in Polish 17 Apr 80 p 4]

CEMA RAILROAD CARPOOL DEVELOPMENT--The council of the European socialist countries' joint carpool [OPW] is holding its 37th conference in Szeged. Railroad specialists from Bulgaria, Czechoslovakia, Poland, Hungary, the GDR, Romania and the USSR are participating in the 3-day conference which was opened on Tuesday [23 Apr] by Lajos Urban, state secretary for transportation and postal affairs. The conference will analyze the OPW's work performed during last year and will discuss resolutions dealing with improvement of the organization's activity. Among others, discussions will be held on the further growth of the carpool and improvement in service. Discussions will be held on problems related to the development of automated traffic control systems for railroad cars. The latter is a particularly important task because since its establishment in 1964, the joint carpool has developed significantly. By the end of last year, the number of cars had increased from 95,000 to nearly 300,000. For more coordinated control, distribution and utilization of these cars, a computerized management system will be worked out to replace manual methods. [Text] [Budapest NEPSZABADSAG in Hungarian 23 Apr 80 p 4 WA]

CSO: 2500

ROLE OF GEOLOGICAL RESEARCH IN DEVELOPMENT OF MINING INDUSTRY

Tirana RRUGA E PARTISE in Albanian No 10, Oct 79 pp 27-35

[Article by Rexhep Shehu: "Geological Research Leads the Development of the Extraction and Processing Industry"]

> [Text] "The party has entrusted the geologists with the lofty task of leading our socialist industrialization through their work." Enver Hoxha

Our party has viewed and views the construction of a socialist society according to the Marxist-Leninist principle of self-reliance as closely related to the utilization of all the material and human resources of our country. Giving priority to the development of various branches of heavy industry, in particular, to the extraction and processing of useful mineral ores, requires the study and securing of the necessary quantity of mineral raw materials. This has been and remains an objective necessity for the development, strengthening and growth of the independence of our people's economy, especially under the conditions of the fierce blockade and of the imperialist-revisionist encirclement.

Proceeding from the great role played by mineral raw materials in creating and developing the material-technical basis of socialism, the party, immediately following the liberation of the country, paid special attention to the creation of the geological service, to the expansion and development at a rapid pace, from one 5-year plan to the other, of geological studies and research, to explore and put into the service of our people's economy the mineral wealth which our rich subsoil conceals.

Our geological service in the full sense of the word is the work of the party, it was born and developed only during its era. Geological research studies and works which were carried out in 1944, as well as the barbarian exploitation of some small deposits of oil, of coal and copper, were carried out by various foreign capitalist companies which exploited our subsoil riches as well as the working class.

As a result of the special care which the party has shown and continues to show, and of the great investments made during these 35 years of people's authority in the field of geological research, the latter has been strengthened and has been greatly developed. We see the results of this work today in the knowledge of geological construction and of the mineral-bearing capacity of the country, in the discovery of the reserves of oil and of gas, of coal, chromium, copper, iron-nickel, phosphorite, of refractory and building materials and of other raw mineral materials.

A powerful extraction and processing industry has been set up as result of the discoveries made and their exploitation, new branches have been established such as that for the enrichment of copper, chromium and coal, the ferrous metallurgical industry for chromium and iron-nickel has been set up along side the nonferrous metallurgy industry for the refining of copper ores, the deep oil processing industry has been set up, new branches of the chemical industry have been created, such as those for the production of nitrogen and phosphate fertilizers, the building materials industry has been strengthened and so forth.

Our country possesses today a number of mineral raw materials which meet out needs for the existing processing industry in existence, and also a clear and solid perspective for the future and for the setting up of important branches of the industry has been insured, and high foreign currency revenues are obtained from their export.

In its congresses and plenums the AWP has set in a farseeing manner the basic guideline and directives on the basis of which geological prospecting in our country has been developed and is being developed. The correct, consistent and farseeing policy of the party in the development of geological prospecting for oil and gas and for other useful solid minerals has aimed to create, through their prospecting and discovery, a healthy and firm base of mineral raw materials, a kind of balance so as to assure and lead the development of heavy industry and of its extraction and processing industry, to open new avenues for a complex development of our people's economy, to put into economic circulation more and more mineral raw materials and riches of our subsoil.

"In order to further strengthen the economy, to guarantee a powerful base of raw and energy materials for industry--stipulates Comrade Enver Hoxha--a special role belong to geology. It [geology] must lead the development industry and must open to it new avenues." (Enver Hoxha, "Report to the Seventh Party Congress of the AWP," p 43).

All the work carried out and the results achieved by our geological service in prospecting for and discovering useful minerals are the fruit of the effort and of the sweat of our working class and of our talented specialists, who, led by the party organizations, have worked to translate into life the recommendations of the party and of Comrade Enver Hoxha. In accordance with the tasks set by the party, the workers of the geological

service have thrown light through their work on the hidden resources of our subsoil, by uncovering its treasures and by putting them in the service of the country and its allround development.

However, it has not been easy to attain these achievements. It has been necessary to overcome many difficulties and obstacles. It has been necessary for the workers of the geological service, for the communists, the cadres and our wonderful workers to struggle especially against the metaphysical and idealistic viewpoints of foreign specialists and of internal enemies who, for ulterior motives, have tried to portray the future of the mineral riches of our country with dark colors, by "proving," allegedly, the "sterility of our subsoil," saying that, allegedly, even those few discovered deposits are "limited spots," or "isolated pockets," that "their exploitation is economically totally useless," and so forth. Through their sabotaging work, the Yugoslav, Soviet, Hungarian, German, Polish and, later, the Chinese specialists, have tried to disorient and to hinder our geological exploration and openly sabotage it. For this purpose they have also cooperated with the internal enemies, from Tuk Jakova and Panajot Plaku to Abdyl Kellezi, Koco Theodhosi and their followers.

But, in contrast to the assertions and the "arguments" of the foreign and internal enemies, our geologists, under the leadership of the party, by implementing the party guidelines and the instructions of Comrade Enver Hoxha, discovered important fields of oil in the limestone and sandy formations, layers of natural gas, a number of chromium deposits on a world scale, important copper, coal, iron-nickel, nickel-silicate, phosphorite, bauxite deposits, sediments of heavy minerals, asbestos, and so forth. Thus, we can mention oil deposits in the limestone areas in the "C" zone which is the largest and the most important deposit discovered to date. The discovery of this deposit is the greatest victory of Albanian geology which was achieved as a result of the implementation of the very valuable recommendations of Comrade Enver Hoxha to make correct generalizations of data, to pass from the known to the unknown, by coordinating correctly the data obtained from the new scientific methods. This discovery, followed also by other discoveries in the "K" zone for oil, in the "F" zone for gas and others, was carried out during the period following the liquidation of the sabotaging and hostile activity carried out in the oil sphere by the treacherous group of A. Kellezi, K. Theodhosi, K. Ngjela, P. Gusho, L. Nashi and all their followers.

Important discoveries of deposits with considerable reserves have also been made for other minerals. Such have been the discovery and putting into operation of large chromium deposits in Bulqize, Bater, Theken, Shkalle; of copper in the Spac-Qaf range of Mal, Gjegjan, Kacinar; the finding and discovery of coal deposits in Memaliaj, Tirana, Gore-Moker, Korce and Colonje; the discovery of iron-nickel deposits in the Librazh-Bogradec region, where powerful mines have been set up, such as those in Pogradec, Grui i Kuq, Cervenake, Bushtrice and others, which constitute the basis of

raw materials for the "steel of the party" metallurgical combine. Large deposits of nickel-silicate have been discovered in the zones of Korce and Kukes, of phosphorites in Gjirokaster, Tepelene and Sarande, of bauxites in Kukes and Tropoje, as well as many important deposits of raw materials for cement, glass, ceramics and so forth.

During these 35 years of people's power, a powerful army of geological w rk-ers, drillers, o..amen, miners, technicians, engineers and other cadres o. geology was created, which, armed with the teachings of the party and of Comrade Enver Hoxha, work in the four corners of the fatherland to discover the riches of the subsoil.

Our geological service possesses today a powerful material-technical base, a rich work experience; our science of Albanian geology is growing and developing, and is in the position to give impetus to geological explorations and to provide the fatherland with more and more deposits of useful minerals.

Characteristic of the development of geological explorations in our country is the great intensification of geological-research operations and their expansion in breadth and depth, covering the entire territory of the country, as well as the growth of the range of minerals being prospected, the high rate at which they are explored. The physical volumes of drill-prospecting for oil and gas during the Sixth Five-Year Plan are 7.6 times greater than that of the first 5-year plan pe' od and for solid useful minerals, over 40 times greater. No comparisons can be made with the preliberation period. During the first 5-year plan, 5-6 minerals were known and work was carried out for their prospecting discovery, whereas during the Sixth Five-Year Plan, work is being done for the prospecting and discovery of industrial and geological reserves for more than 37 types of minerals. In comparison to 1961, the number of deposits which were known and discovered in 1979, is twice as great, for chromium--it is four times as great, for copper ore--eight times, for coals and iron-nickel--four times and so forth. Also the geological and industrial reserves have been increased many times.

In the framework of the entire work which has been carried out and is being carried out in the field of geology, the party has devoted special attention to prospecting and discovery and to the securing of the necessary quantity of the reserves of oil, gas and coal. The party has always had at the center of attention the securing of energy resources and in this context, of fuel products. The explorations for oil and gas have been placed on more solid scientific bases. They are supplied with modern apparatuses and equipment, from seismographic stations and to computers. As a result, the effectiveness of geological research has increased and is increasing day by day.

Today, when the whole world is affected by a profound energy crisis, the correctness of the farseeing policy of our party is particularly evident.

Continuously and consistently the party has given guidance and has taken all the measures to discover the oil, gas and coal reserves, by assuring to the country complete independence in this direction, too.

Life is proving every day that our country possesses substantial oil and gas-bearing strata. This is shown by the discoveries made during the past 4 years. Large oil and gas deposits were discovered precisely in those zones in which the enemies claimed that they did not exist. The discovery of the largest deposit to date of oil and gas in a limestone zone and of some other important resources, not only raises the potential for oil and gas extraction in our country, but it also opens up even greater prospects for the future. Today we have reached the point where we not only meet our needs for oil and gas, but also export, from year to year, more petroleum products, the value of which is increasing constantly throughout the world.

On the basis of the achievements in the field of geological research and of the exploitation of deposits, an entire processing industry has been set up, from the refineries to its deep processing plants. Today, in the deep oil processing plant many products are produced which up to a few years ago were imported. Also on the basis of the discoveries of technological gas, plants have been built and chemical fertilizers are being produced such as ammonium nitrate and urea, which are increasing productivity of agricultural plants and so forth. Greater prospects await the petroleum and gas processing industry, prospects which in the near future will be put in the service of our socialist economy.

The solid minerals industry has undergone a great development. The extraction rates of minerals cannot be compared with the preliberation period. It is sufficient to mention that the production of coal in 1938 is realized now in less than 1 day, the production of chromium, in 27 days, of copper (compared to 1946) in less than 4 days, and so forth. According to statistical data for 1977, our country occupies third place in the world in the production of chromium and 14th place in the production of nickel.

Today, 23 kinds of useful minerals are exploited, processed domestically or are exported. In addition to oil, gas, coal, chromium, copper, bitumen and marble, iron-nickel, pyrite, phosphorites, magnesium, quartz, dolomites, kaolins, construction materials and so forth, are also extracted. On the basis of the reserves discovered of nickel-silicate ores, bauxite, polymetal, sediment, asbestos, titanicmagnetite and others, ores will be put into economic circulation in the near future, thus increasing the range of minerals in exploitation. For some useful solid minerals, such as copper, factories and plants have been built which insure the complete processing of mineral raw materials, up to the production of copper wires and cables, by obtaining from the mineral other associated elements. For chromium too, which is one of the principal articles of export, in addition to the minerals with a high Cr_2O_3 content, we export chromium concentrate which we obtain from two powerful factories which have been built for the enrichment of chromiums with a low Cr_2O_3 content. Whereas the construction of the

ferro-chromium plant in Burrel will further develop the processing of the raw material, by also producing products of high value, such as carbonic ferro-chromium and, in the future, refined ferro-chromium. The metallurgic giant, the "Steel of the Party," by processing the domestic iron-nickel, will also produce nickel and cobalt in the semi-product form. The enrichment of our phosphorites with a low phosphorous content is also being studied, as well as the enrichment of nickel-silicate ores and so forth.

These all show that our processing industry has become powerful and is growing steadily, by applying a complex processing method to the mineral materials of our country and by further raising their value.

Geological prospecting and studies have undergone a great development during this 5-year plan. Operations have been further expanded and strengthened for oil and gas, for the leading known solid minerals, and for other new minerals. During this 5-year plan, more than any other 5-year plan industrial and geological reserves will be discovered and the knowledge of the geological construction and of the mineral-bearing capacity of our country will be raised to a new level.

Important measures of an ideological and technical-scientific nature have been taken and are being taken for the fulfillment of these tasks. An important place has been occupied by the struggle against foreign manifestations and erroneous concepts, which the enemies of the people and of the party have tried to introduce in the geological service, such as that of regarding geological tasks as aims in themselves without combining them with the technical-mineral and economic conditions of exploitation, the struggle against the pursuit of the plan fulfillment in global terms, against succumbing to difficulties and carrying out operations in zones with easy technical-organizational conditions, against euphoria and the concept of practices which hinder the expansion of geological explorations and so forth. Work is being done to overcome backwardness in the drafting, presentation and the defense on time of geological reports, by raising their scientific quality and by implementing the entire necessary complex of studies for the design and the most rational opening of new mines. A better work is being done, especially, in strengthening technical-scientific discipline, during the design phase as well as during the implementation of the geological designs drawn up. Importance has been especially given to the broader involvement of the working masses in geological exploration and the activization in an organized manner of the people's explorers.

The rapid development of the extracting and processing industry, the satisfaction of the needs of the country for energy materials and the expansion of exports require the further growth of the various categories of mineral reserves and the continued improvement of the rapport between them. In accordance with the guidelines which have been issued, the geological workers have concentrated their attention not only on increasing reserves in the known mineral deposits and in their vicinity in order to prolong the life of existing mines, but also on finding the rapid concretization of new

deposits of useful minerals. Work is underway and results have been achieved in the discovery of new minerals, such as bauxites, polymetals, nickel-free iron, phosphorites and so forth. Geological explorations are being better and better oriented in evaluating the principal mineral which this or that zone possesses and also in establishing and evaluating all other minerals for which favorable geological premises exist. Parallel to this, the evaluation of minerals is being carried out for associated elements which they contain, something which raises their economic value during exploitation and processing.

In carrying out the guidelines of the party and the instructions of Comrade Enver Hoxha to study in a scientific manner the richness of our subsoil, to explore every inch of the territory of our country, the geological explorations have covered the entire territory of our country, extending into some less studied zones, such as the Alps, Korabi, Cukali, Vermoshi and so on. In addition to the expansion of exploration in breadth, greater attention than heretofore is being given to knowledge and evaluation in depth, because quite a few zones have just begun to be "scratched" by the geological explorations. As a result of the work done during these part 2-3 years, in some mines and deposits which have been exploited or are in the process of exploitation, it has become possible to concretize and to increase considerably the reserves of useful minerals, thus increasing the lifespan of mines in exploitation and by opening up and increasing their future prospects.

"It is required that the geologists--stressed Enver Hoxha at the Seventh Party Congress--rely in their work ever more powerfully and always on profound and complex studies, carry out precise generalizations of factual data, and make valuable discoveries at the lowest cost possible." (Enver Hoxha "Report to the Seventh Congress of the AWP," p 44). In order to carry out this recommendation of the party, work is being done to raise the economic effectiveness of investments in this vital sector of the economy. Thus, the effectiveness of the ton/ml drill operation has been achieved, and the cost of the geological-research work has been lowered considerably.

A principal factor for the fulfillment of the very important tasks which the party has laid down in this field is the further deepening of the technical-scientific revolution, especially with regard to the improvement of quality and the increase of the scientific level of studies, of designs and the execution of geological processes.

A special role in this connection is played by the expansion of the use of complex geophysical and geochemical methods of exploration. It is a fact that the complex methods have increased from year to year quantitatively and qualitatively, yet these methods have not fully assumed their role of leadership to increase the effectiveness of explorations. Thus, along with the increase in the volumes of work to cover the largest possible areas and to increase the study capacity, in depth, of the mineral deposits, it is necessary to make a qualitative change in these works in terms of

the use of new methods and of machinery with a greater solution capacity, by better combining and using them above surface as well as in the subsoil, so that the projects which are to be subjected to the works of exploration and discovery will be prepared with a high quality.

Scientific research work, in order to solve a series of problems of geological construction, of the laws on the expansion of minerals, of the clarification of the perspectives and of the prognosis for mineral bearing in the most important zones, and to use more effective methods of prospecting and discovery, is being combined better than before, with the concrete works of prospecting and discovery for the fulfillment of the production tasks. Nevertheless, the level achieved has made it necessary for the scientific work to include every link and process of prospecting and discovery, so that it can become more massive and more effective. It is therefore necessary to further expand the work for the involvement of the creative thoughts of the workers, drillers, technicians and engineers, during the design phase as well as during the implementation and the drawing of conclusions for each geological project under study.

The scientific research institutes and the geological enterprises, within the framework of the deepening of the technical-scientific revolution, have made and are making a series of important studies, including the delineating of the new geological map of the People's Socialist Republic of Albania on the 1:2000.000 scale, which will exert considerable influence on the most correct orientation possible and the effective execution of geological exploration.

The prognosis works are being strengthened and increased for the pinpointing of mineral-bearing zones and for the execution of more precise geological characterizations, something which will lead to a further improvement in securing geological reserves, in order to give more accurate support to their planning in the future, always having as a basis the recommendation of Comrade Enver Hoxha to pass from the known to the unknown.

Life shows that parallel to the study themes in the field of geology, it is imperative to undertake more studies in the field of the technology of the enrichment and extraction of useful elements, especially for the poor minerals, for the multi-elements types and others, so that besides the discovery and the finding of reserves, we can be in the position to design and to build other enrichment and refining factories and plants for the new minerals which have yet to be put into the service of the economy, such as the minerals for the production of aluminum, of phosphorites for the production of the raw material for superphosphate, of coals for the production of metallurgical coke, and up to the extraction of metals of great value, such as nickel and metallic cobalt.

The geological studies completed and the results attained in the prospecting and discovery of useful minerals, the data obtained for the known mineral and for new minerals are a powerful support for the expansion and

strengthening of geological-research work in the future. By keeping in mind the fast pace and the strong intensification of geological works and the great tasks which the party has assigned to the geological service to solve, it is imperative for the party organizations and the state and economic organs to improve and to expand the work for the ideological understanding and fulfillment of the assigned tasks in the present stage of the building of the socialist society under the conditions of the fierce blockade and of the imperialist-revisionist encirclement. A further expansion requires, in particular, an effort to raise the scientific level of the entire organizational and management work in the geological enterprises and to raise the technical-professional level of the workers, technicians and engineers. This is essential in order to solve the problems which arise from the discrepancy which continues to exist between the progressive technology in use and the personal skills of the workers and for the strengthening of organization and of proletarian technical-scientific discipline at work, without which the cases of losses which occur in the drilling operations cannot be eliminated and the time spent in repair work cannot be reduced and the indicators of the utilization of drilling equipment and of various machinery used in the field of geology cannot be improved.

The party has assigned important tasks in the field of geology, tasks whose solution requires that the party organizations concentrate their attention better than heretofore on finding ways for the acceleration of the rates of prospecting and discovery of useful mineral deposits in the least possible time and at the lowest cost, and for the timely and qualitative drafting of geological reports.

The working collectives of the geological enterprises of petroleum and of solid minerals, led by the party organizations, will turn the tasks assigned by the party into reality, as they have done so far, and, through revolutionary determination, will better and better play the role which the party has assigned them as leaders of the socialist industrialization of the country. Led by the party guidelines, the workers of the geological service will provide the fatherland with more and more deposits of useful minerals, so necessary for the consolidation of our socialist fatherland, to make it stronger so that all enemies of our country will break their heads on it.

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NEED TO SAVE FUEL, ELECTRIC ENERGY STRESSED

Tirana RRUGA E PARTISE in Albanian No 10, Oct 79 pp 47-56

[Article by Kostaq Lazri: "Conservation of Fuel Materials and of Electric Energy--Problem of the Day for All"]

[Text] Almost all party organizations in work and production centers, the communists and all the workers have placed on the agenda the issue of the conservation of fuels, of other combustible materials and of electric energy. This has been the purpose of the meetings, consultations, the various debates and talks which have taken place and are taking place, and the organizational and technical measures which have been laid down and are being taken. The press and propaganda organs are treating the problems almost daily and the special aspects of the conservation of combustible materials in order to create the fullest convictions about the necessity of conserving these materials and to stimulate and expand the best experience in this field.

The Council of Ministers, on the basis of party guidelines, has, through special decisions assigned tasks and has taken concrete organizational, technical and administrative measures to reduce the quantity of the use of fuels, of electric energy and of other energy materials wherever the possibilities exist, to substitute the costlier ones with the less costly ones, to eliminate misues and waste and to better treat the energy resources of the country.

Results, so far, are on the whole positive. Gradually, the consumers of these energy assets are strengthening the conviction that the irresponsible and unthrifty use of these energy materials is a harmful act and with great consequences for the economy, the more so today when the needs of the country for every type of fuel and energy material, as well as for electric energy are increasing, when, in the situation of the energy crisis which has gripped the bourgeois-revisionist world, their export, even in small quantities, becomes a good source for the further improvement of the export-import balance. Quite a few party and state organs in the districts and

in the ministries report about the measures which have been taken and about the results attained in connection with the rational use of energy resources. New initiatives have been launched, concrete ideas have been expressed to find and to pursue concrete ways for the strengthening of the conservation system in the use of combustible materials and of electric energy.

Despite the results attained, it is evident that a correct, full and profound understanding of the guidelines issued regarding this problem does not exist everywhere, and as a result, the measures which have been taken have not yielded the expected results everywhere. Thus, there have been cases in which the conservation tasks have not been realized and there has been over-consumption. For the January-July period, the consumption of gasoline in a number of districts and enterprises, instead of decreasing according to the assigned tasks, has increased. In the same manner the consumption of petroleum and kerosene has also increased. The task to reduce the use of electric energy by 15 percent, was realized for the same period only 5 percent. At the same time a relatively good conservation has been attained in steam heat.

Here we are not trying to analize where these excesses occurred and their extent because the party organs and organizations, the state and economic organs, as well as the mass organizations concretely examine this question and by means of reports inform the branches, sectors, enterprises and individuals which are not realizing properly the tasks for conserving combustible materials and electric energy. We will, however, touch upon some areas in which there continue to exist great reserves for utilization, in order to raise to a higher level the struggle for the conservation of fuels, coals and of electric energy.

Conservation of Liquid Fuels--An Urgent and Very Important Task

The party, in its economic policy of socialist industrialization of the country has devoted and devotes special attention and care to the preferential development of the petroleum and gas industry, and has struggled and struggles so that this branch of industry will become a powerful support of the material base of the country's economy. And in fact, our economy has developed by relying on our oil and its by-products, by satisfying almost all the needs for the various types of fuels required by a self-acting and independently developed economy. Parallel to the increase of the needs, there has been also a continuous increase in the production of oil and gas, and in fact it has kept ahead of the fulfillment of demands.

However, our constant development under the new situations created for our country, the profound energy crisis which has gripped the bourgeois-revisionist world, presents us with important tasks of seeing with a critical eye not only the achievements in the field ofproduction, but also achievements in using the fuels profitably, by conserving as much as possible and by increasing exports. It has been calculated that if production increases by one thousandth and the use of fuels is reduced at the same ratio, the annual export would grow by close to 1 million dollars, thus obtaining from imports goods which are very useful for expanded socialist reproduction.

The party teaches us that if these problems are properly understood in their entire dimension then surely the petroleum workers who explores, extracts and processes the oil, the tractor driver, the driver, the machinist and the mechanic who uses fuel, will achieve not only a one per thousand increase in production or conservation in the use of oil, but even a ten per thousand without any effort and without demanding supplementary technical and material measures. And in order for this to become a reality, it is necessary for the basic party organizations and their levers to work closely with the workers of production and of consumption, to discuss openly with them so that everyone will understand the value of fuels, so that the feeling of conservation can penetrate deeply into the awareness of everyone, and so that this feeling can lead them in every step in everyday work, in the efforts to find fruitful ways and methods for greater production, for processing with less waste and for consumption with a tight hand, with a strict regimen of fuel conservation.

But in the actual work for the execution of tasks, some party organizations and state and economic organs give importance to big meetings, to the presentation of problems in global terms, to setting tasks and measures in general terms, at times in simple direct forms and to the taking only of some measures of a general propagandistic nature, and with that the work is considered accomplished. However, one cannot expect good results from insufficient, superficial and haphazard work.

In order to carry out an ever more skilled and effective clarifying and convincing work with the people for the increase of production and the thrifty use of liquid fuels, it is necessary for the party and state organs in the districts, and the basic party organizations, to deal better and concretely, in the first place, to learn as to where the deficits in production and the excesses in the use of fuels are and their cause, and to help and demand account for the implementation of the guidelines issued by the party. It is of special importance to give priority to the aid and control where the use of fuels is the greatest, not only because from such users one expects the largest amount of conservation, but also because among these people mistaken ideas are found, such as "we possess tons of fuels, and of what importance is it if we waste a few liters." It is equally necessary that, knowing the situation and the specific role which every type of fuel occupies in the totality of fuels which are used, the necessary measures are concretized for each type.

According to some general data, the principal consumers of fuels in our economy are: for gasoline and diesel oil, the agricultural cooperatives and enterprises, followed by the enterprises of industry, transportation, construction, trade and so on; for kerosene, the communal enterprises (including the consumption by the populace), followed by the trade enterprises; steam heat, first place is occupied by the industrial enterprises, in particular those of light industry, followed by the transportation enterprises. In the districts this order changes. Therefore, the presentation

of the problem of conservation and the defining and pursuit of concrete measures cannot be the same everywhere, for every sector, district and enterprise.

Some data on the national scale show that in the operations of the tractors per each work unit, the machine-tractor stations have consumed 7.9 kg of fuels, as against the 7 kg called for by the plan, and the agricultural enterprises, 7.7 kg as against 6.7 called for by the plan. There are districts such as Berat, Dibre, Tirana, Pogradec and Mat which have lowered the norms of fuel consumption per work unit in agricultural work of the first half of this year, whereas the districts of Durres, Korce, Fier, Kruje and Lezhe have exceeded them. The question can be rightly asked, why do such excesses occur? Has a concrete and differentiated work been done with those who have exceeded the fixed norms? Has good experience been gathered to be passed on to all through debates, talks with others with better results? There are basic party organizations, state and economic organs and mass organizations which do not raise such questions at all, but there are others which although they raise such questions, do not provide the necessary and concrete answers.

In the use of equipment of the machine-tractor stations, there are also problems related to their replacement with other means, with the kind which conserve more fuels, by employing small and very small mechanisms, which do not consume or consume very little combustible material. Today, transportation accounts for about 25 percent of the workload of the machine-tractor stations; in the plains this is done entirely by tractor. But in agriculture this amounts to about 25,000 horses and carts and cart-loads, in addition to work animals, and so forth. If their load would be raised by 10 percent and the number of these means would be increased by the same amount, a few thousand tons of diesel oil would be conserved. We stress this because the wrong tendency is observed in the use of means of transportation in agriculture. Thus, from year to year, the role of tractor transportation has grown more rapidly than that of horse and cart and cart-load. In addition, it must be calculated with pencil in hand how profitable it is in this situation to work with the tractor in small and distant lots, in which, often, twice as much fuel is consumed per work load as for the large lots. The same calculations must be made and measures must be taken to replace liquid fuels with coal in hothouse heaters or to construct new hothouses in the vicinity of heating plants of the enterprises which can supply these hothouses with steam. There are also some cases of careless attitudes and neglect which are a source of unnecessary consumption of fuels. Thus, for example, in the machine-tractor station in Lushnje there were 115 tractors without an ignition system. Such carelessness causes the consumption of approximately 1,000 additional liters of diesel-oil per year. The cleaning of filters in the machine-tractor stations of the districts of Fier and Lushnje consumes 20,000 liters of diesel oil per year, whereas if this became a concentrated process, much less diesel oil would be consumed. And reserves of this kind are to be found everywhere. The question for each person, and all as a collective, to think of finding those ways

and means and to take those measures which will lead toward the reduction per unit of work and production of the consumption of fuels in agriculture.

Another large consumer of liquid fuels is industry. Here too, the party organs and organizations and their levers must carefully observe where and how fuels are consumed, how the tasks and the decisions to replace fuel with coal, electric energy or with methane gas are being implemented, since this is the basic way for the reduction of the use of fuels in the various industrial enterprises.

The Council of Ministers has by special decision laid down tasks and deadlines for these substitutes, by concretely stipulating the heating plants and ovens suitable for the use of coal instead of liquid fuels. But some of these tasks are not being implemented. And not only this, but for the January-July period, despite the good work done in a number of enterprises, mainly in industry, the consumption of gasoline was exceeded by approximately 500 tons and the consumption of diesel oil, by over 3,600 tons. Particularly striking are the excesses in the thermoelectric power plants in Fier, Ballsh and Stalin City, in the Kavaje paper factory and so forth. The basic party organizations in these enterprises do not properly act to demand accountability and to guide the entire work for the implementation of tasks related to the conservation of fuels. It thus happens that for the nonimplementation on time of the tasks, "justifications" are presented, baseless "arguments" are used, or formal "self-criticism" is made. Experience shows that the situation cannot change if the people are not activated, if the problems are not fully solved, in the struggle with the difficulties which have arisen, be they in the field of study or planning, be they of technical material procurement or supply. Parallel to this, it is necessary for the basic party organizations to oppose some wrong attitudes, resulting from the technocratic viewpoints of some cadres, who led by personnel comfort, think that it is easier to work with fuels than with coals.

Important problems on which attention must be better concentrated than heretofore, are the study, re-examination and the reduction of the technical norms of the consumption of fuels per production unit, the implementation of measures which are related to the scientific organization of production to avoid idling or operation with a reduced load of engines, machines, heating plants and the reduction of waste, the avoidance of leaks and so forth.

Not only the transportation enterprises of the Ministry of Communications, but also all the branches of the economy occupy an important place in the use of fuels. And in these enterprises there have been achievements in fuel conservation. Good results have been achieved especially in the motor pool park of Elbasan, the shipping section, and in Elbasan, Rreshen and other places. Yet, there are still failures in the norms of fuel consumption per ton-kilometer and passenger-kilometer. For the gasoline-operated vehicles the excesses reach 5-6 percent, whereas for those on diesel oil, about 8 percent. Many reasons and causes are given, but they are unacceptable. It results from the large number of inspections which have been

carried out that there are many issues which must be carefully dealt with, both for the utilization of vehicles as well as for the correct organization and coordination of work.

First, although special decisions and recommendations have been issued to reduce or stop vehicle transportation on roads parallel to the railroad, excuses are found and many vehicles continue traveling on these roads. From Lushnje alone, 35 percent of the goods which can be transported by train are transported by truck. But what do the party and state organs in the districts and the basic party organizations do in the face of such manifestations? They must sound the alarm, must find the causes of such behavior and must demand and monitor the implementation of concrete measures to prevent them.

Secondly, the use of trailers, as one of the important ways of conserving fuels is not being applied everywhere where the possibilities exist. Thus, for example, the motor pool park of the petroleum industry uses only 10 or 15 of the 150 trucks which it can use with trailers. And who better than the drivers of this park who are close enough to know how difficult it is to extract the oil can provide an example? But this question has not been grasped well by the party committee of the Patos region and the basic organizations of the vehicle park. Surely, for some zones there is the problem of widening the roads, and elsewhere that of widening the loading and unloading platforms. These problems, too, must be viewed and solved as component parts of the measures for the greater use of trailers.

Third, concessions are made and the wrong attitude is maintained toward those persons who allow the movement of vehicles without a full load, in fact these have been cases when fictious documents have been filled. The data show that the loading of vehicles, especially in the transportation parks, is as high as 60-70 percent, and in some cases trips are made without loads. But to what extent are the damages caused to the economy through such acts understood and what is done to eliminate them? The point is that if the load which has been carried so far is increased by only 10 percent, over 10,000 tons of fuel can be saved yearly.

Four, the necessary attention is now shown for the technical condition of the engines. There are many occasions when vehicles are used with defective or wornout parts, and as a consequence, they consume a lot of fuel. Whereas installation of equipment which reduces the consumption of gasoline proposed by the driver Abdrea Marko is not being implemented for all the gasoline-operated trucks.

All these directions, and many other similar ones, constitute a broad area of activity for every communist and worker, for every cadre and specialist, who fights and works conscientiously and resolutely to put into practice the party's call to conserve fuels. It is the duty of the basic organizations to guide better than heretofore, this question of such importance, to inspire, encourage and mobilize the working masses to conserve fuels as

much as possible by exceeding at the same time the tasks for the fulfillment of production plans.

Greater Attention Should Be Given to the Expansion of the Use of Coals and Their Rational Exploitation

Our country is rich in coals. There are sufficient reserves for decades to come, and geological research has steadily opened new perspectives. Nevertheless, the use of coals is still limited. This is the case because tendencies to underestimate this source of energy have existed and continue to exist, tendencies which in some cases, have led to the construction of ovens, boilers and stoves which are unsuitable for coal. The sabotaging work carried out in the field of energy by the enemies of the party and of the people in their objective to keep our country without oil and other sources of energy has also had an impact here.

The production and use of coals has increased under the case of the party, especially during these past years. It is sufficient to mention that the extraction of coal in 1978 has increased 4 times in comparison to 1960. However, the present level of the development of the economy and the situations require that a qualitative step be taken in the wider and more effective use of coals, as well as in the increase of the extracted quantities and their subsequent enrichment in mines and factories.

Important problems exist in the field of the extraction of coals, problems which are related to increasing the extracted quantity by eliminating all those methods and practices which result in large quantities of unmined coal, which in some cases is as high as 20 percent and which impoverishes it by lowering the heating power with the sterile coal which is not properly separated.

But after extraction, too, there is evidence of considerable losses of coal, beginning from its transportation and temporary storage up to its incomplete burning. These losses amount to tens of thousands of tons of coal and constitute a very large reserve of energy. The exploitation of this reserve requires a more resolute struggle against concepts and attitudes of underestimation require the strengthening of the awareness of the workers, the involvement of the creative thought of the masses and the strengthening of technical discipline. Improvement of work presents also the cadres and workers of transportation, of steam plants and of ovens in which coal is used with the need for concrete analyses by providing the answer to the question: "Are we in order concerning the use of coal and what must we do, where and how should we act in order to reduce the losses and raise the useful coefficient of coal burning"?

The party organizations in the enterprises or in the sectors where coal is used have a large amount of work in leading and monitoring efforts which must be undertaken for the implementation of the party guidelines in this field, to overcome as soon as possible the relatively backward situation.

And there are many problems starting from the coal storage fields in which the coal is often stored in an unsystematic manner and in the open, and it happens that during the various seasons of the year the coal is self-burned, turns to dust and is heavily damaged. But even more serious problems exist in the manner of burning because there are many instances when about 25 percent of the coal is not fully burned and remains in ashes. It is known for example that the burning of coal through pulverization is much more effective than in pieces. Therefore, serious efforts must be made to pass gradually to burning through pulverization, which permits at the same time the use of coal dust obtained from extraction or from loading-unloading. The production designers of boiler tanks have special duties in regard to the equipping of enterprises which need boiler tanks which burn coal better.

The struggle for the conservation of coal and for its better utilization is inseparable from the rational exploitation of steam and its condensate. But regarding this question, too, there is underestimation. Quite a few factories and sections, even new ones such as the margarine plant in Fier, the paper plant in Lezhe and others, still do not properly utilize or do not return the entire condensate in the boiler plant, something which leads to considerable amounts of losses of calories that can be used both for technological purposes and for the heating of the boiler's water.

All possibilities exist for the communal and household use of coal to occupy a much larger place than heretofore, especially in the coastal zones, in the cities and villages where burning wood comes from distant places and is difficult to secure. But this requires, among other things, stoves used by the household be made suitable for burning coal both those which are in use as well as those which are being produced. The work which has started for the production of stoves using coal must be further developed by expanding production and by improving the quality of the stoves.

Let Us Further Conserve Electric Energy

The large dimensions of the production and use of electric energy, its expansion and use in all the zones of the country and in all the sectors of the economy and of the social and cultural life confronts us all with the great task of conserving its consumption.

As a result of the work carried out by the party to form correct understandings in connection with the use of electric energy, there has been an improvement in the indicators of the use of electric energy. So far, balances show that quite a few workers' collectives have achieved positive results in the fulfillment of the tasks for conserving electric energy because the plan tasks have been fulfilled and overfulfilled. The task was laid down this year to conserve the use of electric energy by 15 percent especially during the summer months so that the country's needs can be completely met by the energy produced by the hydroelectric power plants and as little as possible by the thermoelectric power plants which operate on liquid fuels or coal. Efforts were made throughout but they were not

of the kind to fully ensure the realization of this objective. At the end of the month of August the consumption of electric energy decreased by only 5 percent.

Some factors have been influencial in the nonfulfillment of this task, but among the main ones has been the insufficient work to make the people conscious of this conservation. It must be pointed out that because of its nature, electric energy gives the impression of flowing without measurement. Electric energy is not stored, nor is it put in the warehouse (to be drawn on receipt of calculation), as is done for other energy resources, but it is enough to turn the key, to press the button for it to flow as a river. Thus the idea is created that electric energy is always available.

The party organizations cannot and should not reconcile themselves to such a concept, the more so when conditions have been created to increase its export due to the rise in the production and the conservation of electric energy. Therefore, the rejection of mistaken concepts in the use of electric energy, and the struggle against manifestations of euphoria observed in some instances in the idea that we now have and will have in the future more electric energy and that therefore, we can use it freely are important tasks for the party organizations. It is not possible to establish a strict regimen in the thrifty use of electric energy without doing this.

The observations and analyses show that among the cadres and the workers of some large industrial centers and of some communal enterprises there are tendencies to plan inflated requests for electric energy in order to be allegedly "insured." This is evident in the fact that during the first half of this year, despite the misappropriations and relatively high losses, the plan for the utilization of electric energy was not fulfilled and about 60 million less kwh of electric energy were used than planned. To this one can say to plan freely in order to be able to say subsequently "we conserved without violating the tasks of plan production." This kind of planning derives from the fact that the norms of the consumption of electric energy are not always technically supported.

Also, the losses in the network constitute a kind of "legalized" misappropriation, especially when they exceed the technical norms. During the first half of this year, the losses in the distribution networks up to 20 percent. This fact must seriously concern the communists, cadres and specialists who work in the electric industry, in viewing the situation concretely and examining the measures which must be taken for each network.

The consumers of energy, whether for the needs of production or for communal and household purposes, assume concrete tasks for the reduction of the consumption of electric energy. Thus for example, the conformity of the power of installed electro-engines with the real needs of the aggregate which it activates, ensures annual savings of tens of millions of kwh of electric energy. A study of this conformity has been carried out almost

everywhere, but it has not been fully implemented because the appropriate ministries have underrated this task and have not properly organized the cooperation between them for the necessary movements of the electro-engines, whereas the party and mass organizations have not been resolute enough to demand that this problem be thoroughly dealt with. Through a better organized work it is possible to lower the consumption of electric energy, especially during the period of the day's peak load (18-21 hours) and during the dry period, by eliminating third shifts wherever possible by organizing the stoppages for overhauls during the summer season and so forth.

Conservation and wise utilization of electric energy is related to many problems which are the business of all beginning with the rational exploitation of hydroelectric plants and up to the conservation of energy in every household. Here we have to do with simple processes, but also complicated ones which require immediate steps but also scientific studies, both by the producers and the consumers.

The task of the party organizations in the work and production centers in the central ministries and everywhere is to organize and develop an extensive ideological work to inspire the creative thought of the workers, to find ways of conservation, to assess their importance and their priority, to enlighten and convince the people and to organize concrete actions and activities which insure this conservation. In the enterprises and central ministries work programs have been drafted, technical, organizational and administrative measures with fixed tasks and deadlines have been defined. But the pursuit and implementation of these measures and the call to accountability is still under the required level. It is therefore necessary to make greater efforts than heretofore for the knowledge of the tasks and the deadlines of implementation and to better organize socialist emulation, by using moral and material stimuli more correctly.

The party directives and guidelines regarding the conservation of energy materials and of electric energy are clear. The positive experience, too, is becoming ever richer. It is important that the working class and all the workers become conscientious in putting these directives into practice. Therefore the party organizations, the economic and state organs at the grassroots and in the central ministries and the mass organizations must better than heretofore assess the struggle for the conservation of energy materials and of electric energy, to respond properly to the situation which we are going through, to strictly carry out the measures stipulated for their conservation.

5112
CSO: 2100

SCIENTIFIC ACHIEVEMENTS THROUGH TRADE UNIONS

Prague PRACE in Czech 3 Apr 80 p 5

[Article by RNDr Ladislav Halberstat, CSc, Chairman CVOS /All Factory Trade Union Committee/ of Workers in Education and Science]

> [Text] "Where and how do our current problems manifest themselves?....we exploit the advances achieved by science and technology slower than other countries and the time span between research-development-production and application is too long."
>
> From Karel Hoffmann's presentation at the Seventh URO Plenum

The importance of considerably accelerating scientific and technical progress and intensifying its link with economic development of our society to raise work efficiency of the society and accelerate the research-development-production and application cycle was emphasized at the 15th CPCZ Congress.

The urgency of the demands to implement the advances achieved in science in everyday practice leads to increasing clamor for consistent high quality trade union work in scientific institutions of the Czechoslovak Academy of Sciences in universities. Under the leadership of party organizations they must participate more effectively in the efforts for high performance in work places, in seeing to the fulfillment of the state plan of basic research and its preparation, in conceptualizing the development of research facilities and in the comprehensive care for workers engaged in scientific pursuits. The cooperation of trade unions in planning tasks and in their specification is especially important at this stage when the Sixth Five-Year Plan ends and preparations for the Seventh Five-Year Plan are in progress.

Trade union participation in the implementation of the principal scientific tasks is part of the resolution of the state-wide and Czech conventions of the Trade Union Association of Workers in Education and Science. For trade union organizations of scientific institutions of the Czechoslovak Academy of Sciences the specific tasks apply which were set down by the Seventh and

Eighth URO Plenum specifying the resolutions of the 14th CPCZ Central Committee Plenum adapted to ROH working conditions.

In the CSR 68 basic ROH organizations with a total membership of 11,722 are active in scientific institutions. They are mostly located around the capital city of Prague, a smaller number in central and south Bohemia and in south and north Moravia kraje. The basic organizations are managed territorially by okres committees of the Trade Union Association of Workers in Education and Science consisting of some 30 officials from the ranks of workers in scientific institutions. Therefore, prerequisites exist for differentiated work with basic ROH organizations in the field of science.

More than 5 years ago the Ninth Central Committee Plenum of the association discussed the resolutions of the CPCZ Central Committee dealing with problems of scientific and technical progress. It stipulated a set of tasks which were also included in the resolution adopted by the congress of the association which are gradually being implemented by the organs of the association and basic ROH organizations. The principal tasks call for:

--Participation in the effective implementation of the ideological educational and popularizing role of science.

--Encouraging the participation of scientific workers in the management of work places and in fostering work initiative and strengthening ties between science and life.

--Participating actively in work with cadres and comprehensive care for workers in the field of science.

--Supporting the development of cooperation between socialist countries in scientific endeavors.

--Striving for effective political and organizational work of the trade union association in the field of science.

--Involving educators fully in the implementation of tasks of scientific and technical progress.

Results of the analysis demonstrate that an absolute majority of basic ROH organizations in CSAV work places participate purposefully in the implementation of the principal tasks assigned to the work places. They participate actively in the preparation and monitoring of work plans, discuss important questions and problems at ROH membership meetings and work consultations. In cooperation with the management of institutions they participate in the continued development of work discipline and initiative with the aim of implementing the principal tasks of the work places. They supervise publicly the implementation of socialist pledges and the activity of brigades of socialist labor and of comprehensive rationalization brigades. Maintaining the brigade status is difficult and involves supervision of work discipline, comradely behavior and public political involvement.

Work initiative focuses primarily on the high quality and timely fulfillment of tasks of the state basic research plan, the implementation of a comprehensive multidisciplinary approach, the fulfillment of the tasks of rationalization programs, the development of cooperation with academies of science of socialist countries, primarily with the USSR Academy of Sciences, developing cooperation with universities in the area of science and research and training of scientific workers, introducing economy in the use of fuels, power and money allocated for the development of scientific work places in the state budget and on optimal utilization of entrusted property especially of instruments and their maintenance in good working conditions.

That recently an effort has been made to improve work initiative in order to fulfill the principal tasks of scientific institutions is unquestioned.

The scope of 31 associated socialist pledges to fulfill long-term tasks exceeded the expectations of CSAV work places. As examples, the following institutions achieved important results by effective encouragement of work initiative:

--The Geophysical Institute constructed a geoelectric model of the outer mantle of the territory of Europe, an atlas of isoseismat maps and a map of the heat flow in Europe.

--The Geographic Institute explored the possibilities of using caves for "speleotherapeutic" purposes.

--The Institute for Plasma Physics raised plasma density by one order of magnitude and proposed a theory of diffusion and convection.

--The Institute for Physiology and Genetics of Domestic Animals elaborated the theoretical prerequisites for breed improvement of cattle, pigs, sheep and fish. The work was completed ahead of the 1980 deadline due to high work initiative.

Marked progress was made in fostering work initiatives to link science more closely with practical life.

--The Microbiological Institute concluded scientific and technical partnership cooperation agreements with 18 work places and partial agreements with additional 61 work places.

--The Entomological Institute introduced a practical method for signaling and forecasting infestation with the larch-tree moth, a dangerous forest pest.

--As a result of high work initiative the Institute for Physiological Control used part of the facilities of the catheterization department to render practical help by performing 2043 ambulatory examinations and hospitalizing 250 patients while reducing average length of confinement.

Some socialist pledges were designed to help industry:

--The Institute for Physics helped the national enterprise Pramet Sumperk introduce the production of calomel.

--The Institute for Nuclear Physics carried out research and development of atypical silicone semiconductor detectors.

--The Electrotechnical Institute built a device for thyristor control of current in electric traction.

--The Institute for Instrumentation Technology carried out innovation of instruments used in electron microscopy, radio frequency spectroscopy and the laser measuring technique.

--The J. Heyrovsky Institute for Physical Chemistry and Electrochemistry developed in cooperation with the national enterprise Laboratorni pristroje (Laboratory Instruments) new types of polarographs and prepared the production of negative accumulator electrodes for the national enterprise Bateria.

Socialist pledges are being monitored in enterprises by ROH committees which regularly check on their fulfillment jointly with management workers. Inspection revealed that the pledges are being fulfilled responsibly.

In spite of the good results achieved by developing work initiatives some problems and shortcomings need to be critically evaluated. Not all enterprises have yet succeeded in accelerating the research-development-production and application cycle. For example, the systems developed must be carried to the production prototype stage which applied research and production are better equipped to do than basic research. Sometimes newly developed devices do not reach the production stage because of shortage of production capacity. An example of this is the Institute for Information and Automation Theory which developed and offered to the national enterprise Tesla the magnetic tape unit MTU 200 for use with computers which, however, will not be produced because of inadequate production capacity.

The above demonstrates that the prerequisites exist for the effective implementation of the role of trade unions in fulfilling the task mentioned by Comrade Vasil Bilak in the report of the CPCZ Central Committee Presidium to the 15th CPCZ Central Committee Plenum:" By their overall impact natural, technical and social sciences must insure the dynamic development of all social development. "The results achieved by improved work initiatives and discipline, purposeful ideological educational work and comprehensive care for the workers employed in the scientific sector prove that this can be done. In recent years the structure of trade unions has been consolidated, the leadership aktiv was broadened by recruiting new young leaders of factory committees and trade union sectors and the number of basic ROH organizations influencing the implementation of vital projects

in CSAV work places is on the increase. Scores of experienced and committed cadres work in territorial organs of the association, the Czech and the Central Committee of the Trade Union Association of Workers in Education and Science who influence individually the management of basic ROH organizations in the field of science and assist actively in implementing the objectives of trade union policies.

8664
CSO: 2400

INCREASE IN CONSTRUCTION LABOR PRODUCTIVITY URGED

Prague SVET HOSPODARSTVI in Czech 28 Feb 80 pp 1, 2

[Article by Engr Jaroslav Inneman, Czechoslovak State Bank: "For Increased Labor Productivity; On Results of Analyses of Fulfillment of Labor Productivity Indicators in Construction"]

[Text] Scientific-technical development, the organization and management of production, but especially man, belong to the factors which influence an increase in labor productivity. Labor productivity analyses, conducted in construction and extending into various partial activities of organizations, can therefore be very effective in many directions and simultaneously contribute to an increase in economic effectiveness.

It is possible to positively evaluate the fulfillment of all yearly implementation plans for the period of the Sixth Five-Year Plan, however, a shortfall in the fulfillment of labor productivity indicators for construction firms has been increasing since 1977, which is resulting in significant losses in the volume of construction work.

Labor productivity, calculated as construction work volume in wholesale prices divided by the reported number of workers, is being favorably influenced by lengthened and extraordinary shifts. In 1978 workers at construction projects put in more than 4 percent of their work as overtime work and in some sectors this indicator is over 5 percent Last year still more overtime was put in.

In the last year of the Sixth Five-Year Plan labor productivity is supposed to increase by 5 percent. Given the elimination of all overtime, labor productivity would have to increase by 10 to 11 percent, which is unrealistic. On the other hand, it would be intolerable if overtime work and extraordinary shifts became the normal means of assuring production targets and continued to increase. On the contrary, it is necessary to restrict overtime and the way to do this is to increase real labor productivity on the basis of the lower utilization of live labor.

The productivity level in individual construction enterprises and sectors varies considerably. While, for instance, average productivity per worker in 1978, in enterprises managed by the CSR Construction Ministry, reached

Kcs 163,173, this included a minimum of Kcs 135,366 (in a structural engineering enterprise) and a maximum of Kcs 223,994 (in a civil engineering enterprise), with a standard deviation of Kcs 19,080 from all values and a coefficient of variation of 11.7 percent. This is a matter, then, of fairly large variability.

Preliminary results suggest that 1979 variability was still greater (weighted average Kcs 166,586, standard deviation Kcs 22,400, coefficient of variation 13.4 percent). Profitability showed a similar development.

The variability of labor productivity and profitability has a very strong influence on enterprise decisionmaking in relation to its production program. Unstable productivity also influences construction deadlines twice as long as those for housing construction projects of comparable budgeted costs. Examples from other types of construction could be presented.

By the same token, labor productivity in various construction sectors is of varying quality. On the average, a low labor share in the construction of bridges, roads and airports (less than 4 thousand manhours per Kcs 1 million construction work) has been achieved in enterprises managed by the CSR Construction Ministry, while in contrast civil construction projects have has a high share of labor (more than 7 thousand manhours per Kcs 1 million construction work).

Knowing the share of labor performance in individual construction sectors makes possible the comparison of the result for a given year with the plan, or with the result from the preceding year. It is also possible, however, to calculate the influence of structural changes in construction sectors, assuming a constant labor share influence per unit of volume of construction work. It is also possible to calculate the influence of a change in the labor share per unit of construction work, assuming an absence of structural changes in construction sections.

In studies of labor productivity which contribute to an evaluation of several of its factors, it is possible to employ a breakdown of resultant labor productivity per worker into four elements:

1. Hourly productivity expressed as the volume of construction work divided by the hours put in by workers on construction projects;

2. Average length of the work day, expressed as the hours put in divided by the days put in by workers on construction projects;

3. Average number of days put in per worker (the total days put in divided by the recorded number of workers on the construction projects);

4. Workers on construction projects as a percentage of the total work force.

It is possible to perform this breakdown on the basis of plan indicators or reality. The first indicator, in fact, indicates the fulfillment of the target for hourly labor productivity per worker, the second indicates overtime, the third the utilization of the work period in terms of days, and in

cases absences, and the fourth factor provides rough information about the structure of the work force. The whole expression will convey, in addition, any discrepancy in the fulfillment of the plan for hourly productivity and productivity per worker, including the reasons for this discrepancy.

An analysis carried out according to this format showed, in 1978, good performance in terms of worker days put in on construction projects and a good utilization of the useable supply of work time, but relatively high amounts of overtime and a low percentage of construction workers in relation to the total work force.

Attention is attracted by undesired wasted shifts, as well as whole days of waiting for work, unexcused absences, and free time granted by factory administration. Whole days of waiting for work reflect principally on shortcomings in factory administration. Practice in the granting of free time by a factory administration is more liberal in some enterprises than others and there are large differences between enterprises on the issue of unexcused absences. This is also true regarding absences at the management level.

Labor productivity is also influenced by the fulfillment of norms for the use of live labor, which are at times at variance with targets for labor productivity set by the plan.

The above methods for analyzing labor productivity per worker permit the identification and measurement of several factors in productivity. But the application of the newest scientific and technical findings, although it is the most powerful factor influencing labor productivity, is very difficult to measure, rather it is totally unmeasureable. Enterprises for planning purposes, calculate in advance, the influences of new technology and technical inputs, especially from the viewpoint of increasing labor productivity, but it is impossible to precisely evaluate the achieved results of new methods.

We can, therefore, judge the effect of the factors in labor productivity on the basis of certain phenomena. It follows from this that the basis of studies in the area of new technological approaches and new technical inputs consists in the researching of the ways in which new methods are introduced and extended, the ways in which they are assured in enterprise plans and whether the plan provides for the wider application of these methods and whether or not the plan is met.

The transition to a new technological approach and the implementation of new techniques represents progress and is a factor in labor productivity. But the wider application of technological progresses which have already been introduced also represents progress and is a factor in labor productivity. The setting up of new, improved techniques is a prerequisite for increased productivity, but it is possible to supplement this prerequisite by the utilization of existing techniques.

The development of technological processes rests mainly in the further industrializing of construction products through a transfer from the construction site to the industrial workplace, including an increase in the number of finished products for construction. Here it is mainly a question of the further utilization of prefabricated construction components including spatial prefabrication for housing, civil and industrial construction and for bridge construction. In other civil engineering construction it is a matter of the appropriate utilization of sophisticated mechanized resources. Measures are being concretized in enterprise plans for the implementation of new technological processes.

As far as technical inputs are concerned, in equipping of workers with basic resources and especially construction machinery has for already a number of years increased faster than labor productivity. This unfavorable trend is also influenced by price increases, in particular the increase of prices, adjusted by domestic reproductive price comparison, for machinery imported from capitalist countries.

The scale of projects for progressive modernization and rapid returns in relation to total investment, as established by the plan, is being met with difficulty; the failure to maintain this percentage has an unfavorable effect on labor productivity increases. We should never forget that new investment should always lead to labor productivity figures at least equal to those in the most advanced comparable productive operations.

The age of machinery and apparatus points to its quality. It is necessary in this area to compare the acquisition and salvage values of machinery, bearing in mind that capital resources are written off only to 100 percent of value. If an enterprise is working with fully depreciated machinery, then adjustments for the whole stock of machinery and apparatus do not correctly describe its wear level.

We judge investment intensiveness by comparing capital stock depreciation and work volume with deliveries for in-house capital investment.

The temporal utilization of construction equipment has improved, to be sure, in recent years, but there remains unused capacity in this area as well, as shown by studies undertaken in several enterprises. In these studies it is possible to use, as guides, norms for the timely and efficient utilization of selected equipment.

The critical position among all these factors, however, is occupied by the individual, his political and moral approach, education, knowledge, experiences, habits, his occupational skill, etc. These elements, however, for the most part do not lend themselves to economic analysis.

9276
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SLOVAK FOOD INDUSTRY MANAGEMENT CRITICIZED

Bratislava SLOBODA in Slovak 10 Apr 80 p 3

[Article by Frantisek Kovac]

[Excerpts] All of us agree that purchases by individuals have been increasing or as it appears, the purchasing power of our population is even higher. Lines have been forming in front of many stores, a symptom which calls for some serious thinking by business managers.

The food industry is our main topic. In Slovakia it is administered by the trade economic unit Zdroj and the Slovak Union of Consumer Cooperatives. Zdroj employs 25,000 persons, 73 percent of them women. Of this number, 4,000 women are on maternity leave and they are missed by the stores.

In spite of this Zdroj was able to exceed the current 5-year plan figures by Kcs 82 million by the end of 1979.

Compared with 1978, sales of meat products have increased by 2.4 percent, poultry 7.3 percent, milk 1.6 percent, butter 4.6 percent, milk products 7 percent, vinegar 39 percent and rice by 14 percent. Slovakia accounted for 44 percent of the CSSR rice consumption.

Zdroj has its problems, primarily a shortage of employees. For example several of its smaller stores in Bratislava have been closed. The mistake is that none of the high school graduates in Bratislava enters the business field.

An this year? Food contracts worth Kcs 390 million are still pending. Compared with last year, total meat deliveries will increase by 2,600 tons. However, fresh meat deliveries will be reduced by 2,500 tons because there will be more processed meat products.

Of the total amount of meat available, fresh meat will represent only 34 percent. Although last year 165 different meat products were marketed,

which are entirely too many, the meat industry has removed only 35 of them from the market. Slovakia will produce 500 tons of live fish; at Christmas alone the demand is for 1,200 tons. And we do not have enough foreign currency to import saltwater fish.

The milk industry has a big problem: poor sealing of milk cartons (a new machine from Finland is being tested in Bratislava to improve the sealing). This year it is short 20 million paper cups for milk products. There is no foreign currency available for importing the necessary amount of containers (from Sweden) for dried milk.

The Trust Zelenina complains about insufficient discipline concerning contract fulfillment. Of the needed 20,000 tons of vegetables, only 3,000 tons have been delivered. Although 21 kg of vegetables are needed per person, contracts have been signed for deliveries of 5 kg per person.

At the Palma enterprise, edible oils are produced from rapeseed. The Hungarians produce them from sunflowers (that is why they are of better quality).

The republic has imported 2.6 million tons of grains. We should take a good look at this. Nevertheless, bread is being wasted. After last Christmas, there were 18 tons of bread left over; after New Year's, 13 tons. In Bratislava bread waste amounts to 10 percent; in Slovakia, 2-3 percent. We produce 26 kinds of bread and package 6 percent (in Bohemia, 4.8 percent). There is a shortage of packaging materials and machinery.

The canning industry has a shortage of 35 million cans and an even greater shortage of glass containers (Why don't we recycle glass containers rather than throwing them out in the garbage?).

In Surany, strawberries are grown on 50 hectares. They are picked by 20,000 brigade members who manage to eat a lot of them. During the past year we imported strawberries worth Kcs 6 million from Poland and 7 million worth of preserves from the USSR. Why don't we grow more strawberries and why don't we pick other fruits suitable for the production of preserves?

This year the beer breweries will be unable to cover the demand despite the fact that the Hungarians are no longer interested in our beer (they built their own breweries). There was a shortage of beer in stores during January because the bottling machinery was being overhauled. In Bratislava it took 6 weeks to repair bottling machinery producing 30,000 bottles of beer per hour. More than half of all the beer produced is bottled. Yet, to name but one, last year Skiounion in Teplice failed to deliver 6 million bottles to Slovak beer breweries. Even arbitration did not help and again this year there will be a bottle shortage.

True, our trade has a lot of other problems. Its mechanization is behind the times. Why has the scientific-technological revolution by-passed it?

What good is it for a business establishment to have forklifts if it does not have batteries for them? This year the same establishment also gets a lot less fuel for its trucks. Deliveries will probably bog down.

The word "better efficiency" (racionalizacia) should be applied in its true meaning. Our trade could be better organized, without additional demands on workers and demands for additional financial means.

It only takes some positive thinking. The trade organization managers should be more cooperative with their subordinates, as was requested during the Seventh Plenum of the Revolutionary Trade Union (ROH). After all, are not all the "businessmen" members of the ROH? The resolution's call for enhancement of the quality of all of our work is also applicable to them.

CSO: 2400

ECONOMIC AGREEMENTS FROM LEIPZIG FAIR ANNOUNCED

East Berlin AW DDR-AUSSENWIRTSCHAFT in German Vol 8 No 12, 19 Mar 80 p 2

[Report by Information and Public Relations Department, GDR Ministry for Foreign Trade: "Significant Business Agreements"]

> [Text] An expression of the intensive commercial activity during the 1980 Leipzig Spring Fair was the conclusion of numerous export and import agreements from which we are giving the following excerpts.

--Important agreements on the shipment of 1.2 million tons of ferrous metallurgical products from the USSR to the GDR for the second half of 1980, 900,000 tons of them hot strip sheet metal, thick plate and shipbuilding plate, 260,000 tons semifinished products, steel sections and 40,000 tons of steel pipes, as agreed upon on 12 March between the VEB Foreign and Domestic Trade Enterprise Metallurgiehandel and the Soviet Foreign Trade Organization Promsyrioimport.

--On 12 March an agreement was made in Leipzig between the AHB [Foreign Trade Enterprise] Maschinen-Export and the Soviet All-Union Association Maschinoimport on the shipment of 685 passenger railroad cars for 1981. This includes dining cars, sleeping cars and long-distance passenger cars produced by the VEB Collective Railroad Car Construction Enterprise of the GDR.

This means a continuation of our traditional shipment of railroad cars from the GDR to the USSR. Up to now, 23,000 railroad passenger cars have been delivered to the USSR. This foreign trade enterprise also signed an agreement to export 35 construction elevators to the Czech foreign trade enterprise Strojexport.

This will be the first time that railroad slewing cranes produced by the CEB "S. M. Kirow" Leipzig will be used in Cuba.

This shipment is based on an agreement between the AHB Maschinen-Export and the Cuban Foreign Trade Enterprise Fecu-Import on the delivery of two railroad slewing cranes, model EDK 500 in 1980.

The FRG Firm Hanomag will receive 28 front loaders from AHB Maschinen-Export.

--The chief trading partner of the GDR machine tool industry, the Soviet foreign trade enterprise Stankoimport, signed extensive export and import agreements with the AHB WMW-Export-Import.

Subject of the agreements are cutting machines tools, presses, tools and wood processing machines.

WMW-Export-Import sold, among other things, a double column milling machine to the Indian firm KCP Madras as well as 4 horizontal boring machines to the Austrian firm Voeest Alpine.

--There were extensive export agreements in the field of high-voltage technology (high and low voltage switches) between the AHB Elektrotechnik Export-Import and the Soviet foreign trade association Mashinoimport.

--The export and import of microelectronic construction components amounting to approximately VM [valuta mark] 50 million was agreed upon between the AHB Elektronic Export-Import and the CSSR foreign trade enterprise KOVO.

--V/O Stankoimport ordered plate straightening presses and bending machines from AHB Invest-Export.

--On 12 March, extensive trade agreement on mutual shipment of trucks during 1981 were made between the AHB Transportmashinen Export-Import and the CSSR foreign trade enterprise Motokov. Among the trucks to be shipped to the CSSR by AHB Transportmashinen will be, among others, trucks of the type IFA W 50. During the same time period, the GDR will receive, in addition to other vehicles, Tatra and Skoda trucks from the CSSR.

The Romanian foreign trade enterprise Auto-Export-Import ordered from the AHB Transportmashinen 100 IFA W 50 truck-sweepers and 300 Multicar M 25 minitrucks. The 250th sweeper will be delivered this year to the Romanian trade partner.

Transportmashinen-Export-Import made agreements with business partners from Nicaragua to ship, for the first time, 800 IFA W 50 trucks of different types produced by VEB Automobilwerke Ludwigsfelde.

The agreement also includes shipment of more than 150 trailers as well as Multicar M 25 minitrucks.

--AHB Fortschritt-Landmaschinen [Progress Agricultural Machines] Export-Import will deliver to Ireland 30 harvester threshers type E 512, as well as field cutters type E 281.

Fortschritt Landmaschinen will also export baking machinery to the FRG and milking machines to Colombia.

--AHB Industrieanlagen-Import and the Czech foreign trade enterprise Skoda-Export signed an agreement on the shipment of five steam producers with a capacity of 120 t/h [tons per hours], and the shipment of additional equipment for a heat plant which is to be assembled in the VEB Braunkohlenkombinat [brown coal combine] Lauchhammer.

The AHB Industrieanlagen-Import and the West Berlin firm Berlin-Consult have signed an agreement on delivery of a plant for the construction of printed circuit board materials. This plant will be used in the VEB Schichtpresstoffwerk [laminated sheet works] in Bernau and will ship to various branches of GDR industry initial products for electronic and consumer goods.

The foreign trade enterprise Industrieanlagen-Import signed an agreement with the firm of Sulzer Brothers AG, Winterthur, Switzerland on the delivery of a plant for the production of liquid gas.

This plant, which is projected to start operations in 1981, will be installed in the VEB Otto Grotewohl, Boehlen.

The same foreign trade enterprise ordered from the Ebner Firm in Austria a conveyor hardening plant which is to be installed in the VEB Kaltwalzwerk [cold pressing work] in Oranienburg, and is projected to start operations in 1981.

This foreign trade enterprise also signed an agreement with the FRG firm Salzgitter-Stahl GmbH on the delivery of a plant for the production of silicate masses and mixtures.

This plant will be installed in the VEB Silikatwerk Brandis, a branch of the VEB Quality and High Grade Steel Combine in Brandenburg.

--A trade agreement amounting to VM 3.8 million has been made between the GDR foreign trade enterprise Limex Gmbh and the foreign trade enterprise Centrozap to export to Poland three and four-floor multipurpose buildings for offices and apartments.

Limex has sold steel constructions to the FRG and pipe lines to Switzerland.

--Extensive export agreements were made by AHB Unitechna with foreign trade enterprises of socialist countries as well as firms of nonsocialist countries, for instance on the delivery of large circular knitting machines to the

USSR, 5,000 garment industry sewing machines to Bulgaria, 6 double carpet weavers to Yugoslavia, 7 flat-knitting machines and finishing machines to Mexico and Peru, and offset printing and book binding machines to the Netherlands.

The AHB made an agreement with the V/O Tekhmashekspport on the delivery of a PLK-2-0 shoe assembly line from the USSR.

--In 1981 the AHB TechnoCommerz GmbH will ship to India 50 diesel generators which will be used to profuce electric power for industrial plants.

--The AHB intermed-export-import is exporting complete laboratories and medical products to Romania, Bulgaria and the USSR. The Soviet V/O Medeksport once again placed orders for medicines and veterinary pharmaceutical products amounting to approximately VM 110 million.

--As syndicate leader for different GDR foreign trade enterprises, the foreign trade enterprise Chemie-Export-Import signed a long-range agreement for the years 1981 to 1985 with the Japanese firm Marubeni.

Chemie-Export-Import has sold significant amounts of plant protection agents and pesticides to Nicaragua.

--The AHB Bergbau-Handel has ordered 20,000 tons of raw asbestos from the Canadian firm Asbestos Corp Ltd, Montreal.

--Poland has ordered fishing nets from the AHB Textilcommerz.

--In the presence of the foreign trade ministers of the GDR and Bulgaria, Horst Soelle and Khristo Khcristov, important import agreements were concluded. On their basis, our country will receive 41.5 million bottles of wing, as well as filter cigarettes.

--AHB Genussmittel [nonessential foods and beverages] Import-Export has ordered 1,400 tons of raw coffee from the firm Philippine Veterans Investment Development Corp/Philippines.

--The GDR foreign trade enterprise Buchexport will sell books, stamps, philately items, wallpaper albums, maps and papers to Mongolia, the USSR, Norway, Sweden, Denmark, the FRG, Switzerland and the United States.

8889
CSO: 2300

MANAGERS, PARTY ORGANIZERS REVIEW COMBINE ACCOMPLISHMENTS

East Berlin DIE WIRTSCHAFT in German Vol 35 No 4, 3 Apr 80 p 3

[Article by Karlheinz Hilbert, chief editor, DIE WIRTSCHAFT: "Communists Face Up to New Standards -- Exchange of Experiences in Gera, 19-21 March, Confirms: Learning From the Best Guarantees High Efficiency Increase"]

[Text] The SED Central Committee exchange of experiences with the general directors of combines and party organizers in March in Gera made clear that the GDR economy, with the full force of the combines behind it, can achieve a high increase in efficiency even under the new conditions of the 1980's. The 129 combines that have been newly established or reorganized in recent years constitute over 90 percent of our economy's industrial and construction capacity, with industrial goods production of approximately M 260 billion and 2.4 million employees. Ninety percent of industry's research and development potential is concentrated in the centrally managed combines. It represents such a comprehensive social and economic potential that it will be possible to uncover major new reserves in the way of effectiveness and quality of the work. In line with this, both the creative deliberations and the concluding remarks by Comrade Guenter Mittag provided new intellectual impetus toward implementing the resolutions of the 11th SED Central Committee Plenum.

In a letter to SED Central Committee General Secretary Erich Honecker, the participants pledged to exceed this year's plan for industrial goods production by M 2 billion, essentially by economizing on materials. This amounts to an average of 2 days' worth of production per combine. This pledge is evidence of the firm intention of the general directors and party organizers to do their utmost to advance the policy of the principal objective, with its unity of economic and social policies, by increasing performances and effectiveness under the new conditions of reproduction. The opportunities that exist and the steps that will lead in this direction became especially apparent in Gera.

Policy and Economy Are One

The exchange of experiences took place at a time that is politically very important to the further stable and continuing development of our republic, for implementation of the 1980 Economic Plan -- and with it the continued growth of our economy -- will determine the successful realization of the objectives set forth by the eighth and ninth party congresses and simultaneously lay the groundwork for preparing the 10th Party Congress to be held early in 1981. A very important ideological prerequisite for the work ahead consists in a full realization of this interrelationship between the continuous implementation of resolutions passed by the last party congress and preparation for the new requirements being posed with a view to the 1981-1985 Five-Year Plan. "We can assume," noted Comrade Guenter Mittag in this connection, "that our party will be in possession of an absolutely clear, unequivocal and scientifically based set of objectives in this decisive phase of development of the GDR. A stable orientation of this kind for uniform action by the party is of great importance to the continuity of successful internal development of the GDR, particularly in a troubled time of major international political change."

The Gera exchange of experiences on further accelerating increases in efficiency in the GDR was extraordinarily important in this regard because -- following the advice of Comrade Erich Honecker in his speech to the first secretaries of the party's kreis managements -- the general directors of combines drew additional personal conclusions for their work from the methods used by the best combines.

Studies in Leading Combines

During the exchange of experiences, the general directors and party organizers studied the working methods of advanced combines at first hand.

Workers at the Carl Zeiss Jena Combine have in the last 4 years managed to reduce development time for new products from an average of 56 months to 30.5 months and to achieve average annual growth rates of 11.8 percent for marketed goods production and 28.4 percent for exports to nonsocialist economic regions. General Director Dr Wolfgang Biermann cited as essential prerequisites for this the strict enforcement of personal responsibility as well as management and planning discipline at all levels of management. He said it should be part of a manager's style of operation to make himself thoroughly familiar with the vast amount of analytical material that accumulates in the combine. Only in this way can one grasp the problems in their complexity and interdependence. An opinion well grounded in fact enables a manager to take responsibility and convert it into collective accomplishment. A general director holds all the strings when he maintains a strict watch over directives. "There is some cost as far as outlays go, but it pays off in better and faster results!" The working people in the 19 enterprises of the Dresden Robotron Combine have over the past 3 years increased labor productivity at a faster rate than goods

production. At the bottom of this, noted General Director Prof Wolfgang Biedermann, are scientific-technical innovations, the comprehensive rationalization of pre-production and assembly sectors and the increased use of microelectronics. Testing and start-up periods for electronic data processing systems were reduced to one-fifth, for example. The most important source of increased efficiency within the next few years will be the continued development of the combine's division of labor system. This will make it possible to renew the product mix quickly, to attain above-average growth rates in the export sector and to provide other sectors of the economy with additional rationalization means.

Dr Herbert Kroker, general director of the Transformer Technology Combine in Erfurt, noted that managers have to spend 30 to 40 percent of their time on foresighted, long-range work in order to achieve peak efficiency with present levels of science and technology and to guarantee above-average growth rates over the long term. For example, productivity for the new high-powered automated presses is twice as high as that for earlier models.

General Director Rudi Winter of the Heckert Combine explained that the utility value of new products to be put into production must be at least 10 percent higher than that of the products they are replacing and must retain their novelty value on the world market for a period of several years. This calls for performance comparisons beginning at a very early stage, for the ability of machine tools to compete is decided right on the drawing board. Neglect that is tolerated in the research and development phase cannot be compensated for in the production process, commented Rudi Winter. Consequently, much is being done in the combine to establish conditions conducive to creative work by the design engineers.

Additional experiences were shared by Prof Dr Wolfgang Opitz, general director of the Karl-Marx-Stadt Household Appliances Combine, and Leuna Works General Director Erich Mueller.

Work According to Standards of the Best

During combine tours, question-and-answer sessions and seminars, each participant was able to gain valuable ideas for his own work and to draw conclusions for management and planning in his combine. The issue at all times was how to use all the vast potential of the new economic units to bring about substantial increases in efficiency, how to structure the self-contained reproduction process in the best possible way and how in this process -- considering one's own intellectual and material potential -- one can fully measure up to the concrete economic responsibility. In other words, the question is how a political management of economic processes can organize on the basis of scientific methods the process of societal work in the combine with the greatest effectiveness for the republic.

This exchange of experiences unquestionably helped familiarize the managers with the standards of the best. In his analytical closing remarks which set forth economic policy guidelines, Comrade Guenter Mittag discussed at great length the need to eliminate the differences that still exist in the performance of combines and enterprises in the individual areas. Good foundations exist for using the many years of experience by efficiently operating economic units to achieve a rapid rise in the level of work in all combines. What we must do now, said Comrade Guenter Mittag, is bring to bear in each individual combine the effect of the sum total of experiences as reflected in Gera and the combines visited. In this way, every combine can move toward the level of the advanced ones. "All will now orient themselves according to the level of the advanced; none may and none will lag behind. Conscious of that which is possible on the strength of a distinct, politically aggressive position in tandem with qualified management, all will take a new giant step forward to strengthen our republic."

Also a reflection of this is the aforementioned letter to the general secretary of the Central Committee, in which all combines issued a joint pledge for the first time. This is also an outward expression of the fact that one cannot be separated from the others, but that all are advancing together with the mutual support of all. The exchange of experiences helped establish a uniform position for action, a uniform way to strengthen unity.

It became evident at the same time that under the new conditions of the 1980's, the battle to increase efficiency cannot be won using the methods of past years. Today the advantages of socialism must be linked with the scientific-technical revolution on a higher level: The standard no longer is "somewhat more," but rather the scientific infusion of all economic activity with the aim of using the most modern technologies to produce top-flight scientific-technical achievements over the entire economic spectrum. Included here is the decision to increase the share of goods production bearing the "Q" quality label, the greater refinement of material and its most economical utilization and the consistent use of manpower resources and all capital investments.

It is also important that the effect of qualitative growth factors and their inner workings be heightened through management, planning and incentive measures.

The exchange of experiences also included discussions of problems that are presently obstructive and yet to be solved. It became evident, however, that the major factors upon which the success of increased efficiency depend are capable management, a long-range conception for combine development, personal involvement on the part of the directors and, last but not least, the aggressiveness of the party organizations.

The state organs are also expected to exhibit an aggressive stance and style of operation similar to those in the combines. The rise in efficiency being called for by the party can be assured only by incorporating combine conceptions into long-range economic planning and ensuring economic proportionality, including the most effective allocation of resources.

Our constant point of reference, noted Comrade Guenter Mittag, is that it is people who advance the process of social evolution. Any progress in the development of economic efficiency depends ultimately upon their conscious political action, their capabilities and their initiative and discipline.

7458
CSO: 2300

DEPARTMENT HEAD INTERVIEWED ON NEW PRICE MECHANISM

Budapest FIGYELO in Hungarian No 15, 9 Apr 80 pp 1, 6

[Interview with Laszlo Racz, Head of the National Material and Price Office by Dr Gyorgy Varga, deputy editor-in-chief of FIGYELO; date and place not given]

[Text] In issue No 45, 1979 of our journal we published an interview with Dr Laszlo Racz, head of the Economics Department within the National Office of Materiel and Price Control, regarding the 1980 modification of the producer-price system. Already then a series of interpretational and practical questions arose which could not yet be answered at that time. For conversion to the new price system, as we have indicated already then, is not a one-stage project. One-stage conversion has not been feasible because world-market price movements still have not leveled off.

Dr Gyorgy Varga, deputy editor-in-chief of our journal, has again interviewed Dr Laszlo Racz on the occasion that the directives for price formation geared to the foreign-trade prices have been promulgated, and the National Office of Materiel and Price Control report on reviewing the starting prices has been published.

[Question:] The price system geared to the foreign-trade prices has begun to function only a few days ago. In other words, with the end of the price freeze, the price mechanism has actually begun to function. What price movements have there been during the past quarter on the world market?

[Answer:] We should point out as a fact that the obligation to report in advance any intention to raise the prices of industrial goods has likewise ceased on the last day of March. At the same time, however, the world-market prices of many commodity groups have changed significantly in comparison with the prices on the basis of which we introduced the 1 January 1980 starting prices. I intentionally used the word "changed," because the world-market prices of a few important commodity groups have declined, although the prices of most products have increased. (For example, the prices of hides and coffee have declined.) There are products whose price level rose temporarily, only to drop again after a short time. (One such example is copper.) We adjusted the starting prices to a copper price of about 1900 dollars, but in the meantime this price increased to 2800 dollars, and lately it has again dropped to 2200 dollars.

In this context I would like to clarify a misunderstanding. Only the new prices became effective as of 1 January 1980, but not the new price mechanism. Price adjustment is not identical with price mechanism. The new price mechanism's "soul" is specifically adjustment to the foreign-trade prices. Such flexible adjustment, typical of 70 percent of the industrial products, has become feasible at the beginning of the second quarter.

[Question:] But this also means that in the first quarter we have again lagged behind the world-market price level, respectively behind the changes in the price ratios.

[Answer:] Yes, this is true. There was a certain lag already in the last period of the price reform. This would have required setting prices that in some instances would have been higher, and in some instances lower, than the starting prices. Now, at the start of the second quarter, a situation has developed such that the prices of materials had to be raised significantly, and the Hungarian National Bank had to reduce the exchange rate of the dollar and of other currencies, once by 0.30 forint, and then again by 1.40 forints, i.e., by approximately 5 percent. Even at this reduction of the exchange rate, the price level of materials had to be raised by about 10 to 12 percent, which is nearly one-half of the 1 January price increase.

The prices of finished industrial goods are being raised at a more moderate rate, and in some areas they are being reduced.

In the case of industrial raw materials and such high-volume semifinished products as, for example, metallurgical products, sawed soft lumber, textile materials, etc., the overwhelming majority of the price changes were made as of 1 April. However, the prices of finished products will change in accordance with how the warranted price changes can be introduced by mutual agreement in the concluded contracts.

[Question:] Many enterprises anticipated that they would be able to raise their prices in accordance with the changes in the foreign-market prices. If they were able to do so, such enterprises refrained from assuming delivery commitments until the new prices safely developed.

[Answer:] Unfortunately, this is true. But once we acquire suitable experience with the flexible price mechanism, the anomalies in conjunction with contracting will hopefully cease. Already now when the price mechanism is beginning to function, many enterprises are modifying their prices. When modifying prices, however, one must take into account that prices cannot be "oversecured" in the contracts. The foreign-trade prices change, and adjustment to the highest known prices is "oversecuring" that the law will not recognize. Therefore we must learn to take our mutual interests into account and to form prices on the basis of mutual risk.

[Question:] With the startup of the price mechanism a process has begun in which the prices of raw materials and the prices of finished products will differ from each other to some extent. Am I assuming this correctly on the basis of what has been said?

[Answer:] I think your assumption is correct if you mean to say that not every increase in raw-material prices can be passed on automatically to the buyer of the finished product. There will be enterprises whose export prices for finished products will not rise as a result of world-market competition, while the prices they pay for energy and raw materials will rise. Consequently, according to the pricing principle, their domestic-price level cannot be raised. In the case of several engineering enterprises, for example, it is already evident that for this reason their profits will foreseeably decline in comparison with the first quarter.

[Question:] What will happen in such cases?

[Answer:] By no means will the enterprises be able to anticipate some sort of financial assitance in such cases. The enterprise's profit situation will unquestionably deteriorate. But let me add immediately that we can expect shifts not only in the negative direction. We have many enterprises that raised their export prices over last year in such a way that their profit will improve. We anticipate that about one-half of the industrial enterprises whose prices are geared to the export prices will show a higher profit in the second quarter, while profits at the other half of the enterprises will decline.

[Question:] Are there any branch peculiarities in this forecast of how profits will develop?

[Answer:] There seem to be at present, but I fear that these branch peculiarities cannot be regarded as final or permanently valid. In any case it seems that with the changes taking place in April we can expect declining profits in engineering and rising profits in light industry, but in both areas there will be enterprises whose profitability will improve, as well as enterprises whose profitability will decline.

[Question:] Besides the development of export prices, what other price-policy considerations play a role in the development of the prices of finished products, with special attention to the consumer-price level?

[Answer:] Already the higher prices of energy and raw materials would in themselves affect the population or the national economy sensitively in those areas where noncompetitive pricing applies. (For example, in agriculture or the sphere of services.) In our consumer-price policy, therefore, we start out from the projections of the standard of living and of the annual price plan. Consequently, the effect of higher raw-material and energy prices upon consumer prices must be moderated considerably.

[Question:] Will this necessarily increase the role of financial bridges in the consumer sphere and the sphere of noncompetitive pricing?

[Answer:] That is correct and also unavoidable, because price policy may be pursued only in harmony with the policy on the standard of living. In a few instances it will be necessary to postpone also the modernization of the producer prices, in the interest of protecting the consumer-price level

or of forming it in a planned manner. Thus we might say that the tasks of perfecting the price system must be solved within the consumer-price level's rise and in harmony with the policy on the standard of living. All this does not mean that we are abandoning the unification of the producer and consumer prices, merely that we will solve this unification within the farmework of plan-conforming economic policy.

[Question:] Interpretation of following the foreign-trade prices has been the subject of debate during the past few months. In its recently issued pricing directives, what standpoint does the National Office of Materiel and Price Control adopt on this question?

[Answer:] In the case of basic materials, the requirement generally is to follow the permanent import prices. The import price of basic materials may be regarded as permanent if in its contracts the enterprise has fixed this price for at least three months.

This presupposes rapid adjustment to the world-market prices. The purpose of rapid adjustment is to ensure that users generally procure their materials when the world-market prices of these materials are relatively low, respectively that the prices of materials be low at home when they are low also on the world market, and be more expensive at home when prices on the world market are rising.

The prices of finished products are geared to the export prices. The enterprise is obliged to calculate the producer price of its products with a profit margin that corresponds to its average profit on nonruble-denominated export, over a longer period of time specified in the regulations on enterprise pricing. For finished products this period of time is much longer than for materials, usually one year, but at most two years in the case of finished products with a long production cycle. The enterprise will be wise to check at least every quarter whether its prices are commensurate with the world-market prices. Thus if it has calculated unjustifiably higher or lower prices, the enterprise is able to correct them in the next quarter. With this quarterly self-monitoring the enterprise must strive to adjust the trend of its domestic prices to the changes in the foreign-trade prices.

As a rule, the enterprise's profit on the total domestic sales of its products may not exceed the total profit realized in the export prices. There may be exceptions, however. For example, if the enterprise has modernized the technology of its products intended specifically for domestic marketing, or if its product modernization results in significant cost reduction.

In pricing some of its products the enterprise may depart from the profit on its total export, to the extent warranted by domestic market conditions. The essential requirement is that on an annual basis the total profit on products intended for domestic marketing must not exceed the total profit realized in the export prices.

I would like to note that the enterprise may apply its average export profit to its producer prices only if the increase of the prices formed in this manner does not exceed the rise of the export-price level. Thus there is a twofold barrier to curb attempts to raise prices: first the profit rate, and secondly the price level.

[Question:] But the export prices might change unexpectedly, and perhaps significantly, specifically in the fourth quarter. Under these circumstances, are not the requirements we place on enterprice price policy too excessive?

[Answer:] I don't think so. We will not investigate in a bureacratic manner the adjustments to the export prices. Obviously it is not always reasonable to adjust 100 percent to the changes in the export prices over short periods of time. The essential thing is that the enterprise's price policy must unambiguously show that the enterprise is adjusting to the trend of the export prices, or to the trend of the profitability of export.

[Question:] The enterprises have generally accepted the new pricing principle, but they object that they received the detailed directives too late to organize their practical work. What caused the delay?

[Answer:] First of all, we did not anticipate sharp movements in world-market prices at the end of 1979 and at the beginning of this year. The greater-than-expected price movements caught the price authorities somewhat unprepared, and this too delayed the elaboration of detailed regulations for pricing geared to the foreign-trade prices. We thought that the starting prices were high rather than low, and thus in the correction phase (the first half of 1980) that we mentioned in our first interview we expected a moderation of the starting-price level. In contrast with this, however, the rising world-market prices mean that even in manufacturing the producer prices will rise rather than decline.

[Question:] How do we stand with the starting prices during the first quarter?

[Answer:] According to the January and February price statistics released by KSH [Central Bureau of Statistics], the starting prices in manufacturing are higher than had been planned. The reported price index is higher than the planned price index by 10 percent in engineering, and by 6 to 7 percent in the textile industry. The competent authorities are now investigating the causes of these departures.

[Question:] This creates a problem because it makes questionable to what starting-price level to compare the price modifications made necessary by changing foreign-trade prices. Is that correct?

[Answer:] Yes, it is. But I wish to note that the regulations require the enterprises themselves to make corrections if the enterprises are gearing their producer prices to the export prices. Thus if an enterprise finds that its starting prices contain more profit than its export prices, it

must reduce its producer prices. And the feasibility of following the export prices must be investigated in relation to these reduced producer prices. Of course, also the enterprises that are outside the sphere of competitive pricing must correct their starting prices if the starting prices are higher than what the directives issued for the price adjustments allow, or if the profit contained in the starting prices exceeds the rate of profit specified in the directives. According to the standpoint issued by the National Office of Materiel and Price Control, the enterprise is also obliged to reimburse its customers if it employs a higher starting price than what is warranted.

[Question:] Another issue that was raised in the debate is how to interpret the following of the export prices in cases when an enterprise exports different products than what it markets domestically. What link can there be in such cases between the foreign-trade price and the domestic price?

[Answer:] I think this question has been exaggerated by some of the contributors to the debate. The majority of the enterprises sell on both markets products produced with the same capacities. However, if the commodity structure of export and the commodity structure of domestic sales differ considerably, then the National Office of Materiel and Price Control can help to find a suitable method of following the export prices. Naturally, practice will form our methods, but we still need experience for this purpose.

[Question:] How can we ensure that enterprises outside the sphere of competitive pricing will operate according to the same economic criteria as the enterprises that employ the principle of competitive pricing?

[Answer:] Our objective is to ensure that no group of enterprises will find themselves in an unjustifiably favorable or unfavorable situation so far as the conditions of their economic activity are concerned. In the sphere outside industry we wish to achieve this through the extensive application of official prices and official guiding prices. In the noncompetitive areas of industry and certain services it will be necessary to adapt to the prices of the competitive leading enterprise if there is one. KGM [Ministry of Metallurgy and Engineering] has issued the leading enterprises' prices as a list of guiding prices, for the engineering enterprises that do not belong in the sphere of competitive pricing. If the following enterprises observe these guiding prices, then equal treatment is ensured. The price authorities will scrutinize closely the application of prices that exceed the prices of the leading enterprises.

In cases when there is no opportunity for comparisons with the prices within the sphere of competitive pricing, comparisons with the starting prices will apply.

[Question:] Up to now we have discussed in part what questions have arisen at the enterprises in conjunction with the central price regulations. Now I would like to ask what are the tasks of enterprise price policy?

[Answer:] I think enterprise price policy must concentrate on reviewing the prices.

In conjunction with following the foreign-trade prices I would like to emphasize that this must be done dynamically. Whereas in the past the enterprises have become accustomed to following the past price base (for example, the average outlays during the past six months), whenever they conclude a contract they will now have to solve the problem of following the future price base (for example, the foreign-trade price applicable at the time of delivery).

Finally, war must be waged everywhere against persisting red tape. A dynamic and flexible price mechanism does not tolerate the continuous repricing of tens and thousands of items in the warehouse, because this involves an immense amount of work even though in some instances such repricing is merely symbolic. But even pricing itself cannot always be solved by the "total" methods to which we have become accustomed in the past. Minor price changes can be implemented also by simple methods (for example, by the methods of indexing), and only in essential cases is it necessary to recalculate the price of every product by the traditional methods.

[Question:] Will not more red tape result from the fact that in trade we are "supplanting" on a system of rather narrow price markups a dynamic price system, and will this not hamper the development of trade's ability to assume risk?

[Answer:] Trade's ability to assume risk is indeed unsatisfactory. But to this I wolud like to add two comments. First, an increase of the ability to assume risk is not only a question of pricing, price regulation and income regulation, but it is also a function of a general improvement in economic conditions. Thus particularly the consolidation of the balance of supply and demand would lend meaning to increasing trade's ability to assume risk. Secondly, I am convinced that there are great reserves in the organization of trade's work, in its productivty and cost management. Therefore the profits of the trade enterprises--and consequently also their ability to assume risk--can be improved even at the present price markups.

1014
CSO: 2500

METALLURGY, MACHINE INDUSTRY MINISTRY REORGANIZED

Budapest KOHO-ES GEPIPARI KOZLONY [KGK] in Hungarian No 37, Dec 79 pp 383-385

[Decree by Istvan Soltesz, minister of metallurgy and machine industry]

[Text] Decree No 125/1979 (KGK 37.) KGM [Minister of Metallurgy and Machine Industry]

Modification of the Organization of the Ministry of Metallurgy and Machine Industry

Directive for heads of the ministry's organizational units, and of the economic operating and other organs belonging under the ministry's supervision (hereinafter: enterprises).

Due to changes which have taken place at the top levels of the ministry's management, I hereby approve the new supervisory system of the Ministry of Metallurgy and Machine Industry according to the following terms:

I. Supervision of the ministry's main departments (independent departments):

Supervised by the minister:

Personnel and Training Main Department

Under the supervision of state secretary Bela Rabi belong the:

Main Department of Control and Information
Main Department of Management and Legal Affairs
Main Department of Planning and Economics
Independent Economics Department
Independent Information Department

Under the supervision of deputy minister Andras Gabor belong the:

Main Department for International Cooperation
Independent Department of Protocol

Under the supervision of deputy minister Miklos Kozma belong the:

Main Department of Trade

Under the supervision of deputy minister Istvan Littvai belong the:

Main Department for General Organization

Under the supervision of deputy minister Istvan Muller belong the:

Main Department for Investments
Main Department for Industrial Development

II. Enterprises and other organs under supervision of the state secretary and by the deputy ministers:

Enterprises and other organs under the supervision of state secretary Bela Rabi:

7141 Organizational and Computer Technology Institute of the Metallurgy and Machine Industry
7142 Scientific Information and Industrial Economics Center of the Metallurgy and Machine Industry

Enterprises and other organs under the supervision of deputy minister Sandor Csepanyi:

1311 Borsodnadasd Laminate Factory
Csepel Iron and Metal Works
December 4. Wire Works
Danubian Iron Works
Joint Enterprise for Preparing Metallurgical Raw Materials
Lenin Metallurgical Works
Ozd Metallurgical Works
Foundry Enterprise
Alloy Factory
Salgotarjan Metallurgical Works
Heating Technology Research Institute
Iron Industry Research Institute
Hungarian Iron and Steel Industrial Association
Enterprise for Building Metallurgical Factories
1511 Magnesite Industry Works

Enterprises and other organs under the supervision of deputy minister Andras Gabor:

1411 Hungarian Ballbearing Works
Machine Tool Industrial Works
Machine Tool Programming Association

1421 Csepel Automotive Factory
Precision Assembly Factory
IKARUS Body and Vehicle Factory
Small Motor and Machinery Factory
Hungarian Railroad Car and Machine Factory
Automotive Industrial Research Institute
1461 Screw Industrial Enterprise
DANUVIA Central Tool and Instrument Factory
Cutting Tool Industrial Enterprise
Hand Tool Factory
Hungarian Steel Goods Factory

Enterprises and other organs under the supervision of deputy minister Dr Janos Heiczman:

1411 Size Reduction Machinery Factory
April 4. Machine Industrial Works
Budapest Chemical Industrial Machine Factory
Factory and Machine Installation Enterprise
Drive Mechanism and Painting Equipment Factory
Lang Machine Factory
MEZOGEPTROSZT [Agricultural Machinery Supply Trust]
Ventillating Equipment Works
1461 Aluminum Goods Factory
ELZETT Works [batteries. Translator.]
"FEG" Weapon and Gas Equipment Factory
Industrial Implement and Machine Factory
LAMPART Enamel Industrial Works
Matra [mountain] Area Metal Works
Mosonmagyarovar Metal Equipment Factory
Ujpest Machine Element Factory
5212 CHEMIMAS Chemical Machinery Design and General Contracting Enterprise

Enterprises and other organs under the supervision of deputy minister Miklos Kozma:

1421 Pest Regional Machine Factory
1431 Automotive Electrical Equipment Factory
BAKONY Metal and Electrical Equipment Works
United Electrical Machine Factory
Ganz Electric Works
Hajdusag Industrial Works
Refrigeration Machinery Factory
Industrial Instrument Factory
KONTAKTA Parts Factory
Hungarian Cable Works
Electrical Industrial Research Institute
1451 Ganz Instrument Works
Optical Equipment Factory
1461 Mechanical Equipment Works

1619 Electrical Insulating and Synthetic Material Factory
5212 GEPEXPORT Design and General Contracting Enterprise for Exporting Complete Factory Equipment

The employer's rights concerning heads of the enterprises listed below are exercised by the deputy minister. The head of the Main Department of Trade is responsible for providing coordination of professional supervision to these enterprises.

1441 Electrical Maintenance Enterprise for the Machine Industry
1451 Office Machine Technology Enterprise
5111 ELEKTROMODUL Hungarian Electronics Technology Parts Trade Enterprise
FERROGLOBUS Hungarian Trade Enterprise for Iron and Steel Producing Equipment

Machine Industrial Production Equipment Trade Enterprise
METALLOGLOBUS Trade Enterprise for Metal Products and Production Equipment

Instrument and Office Machine Sales Enterprise
Equipment [or: Trains] Sales Enterprise
Sales Enterprise for Electrical and Hardware Products
Sales Enterprise for Tools and Small Machinery

Enterprises and other organs under the supervision of deputy minister Istvan Littvai:

1441 BHG [Beloiannisz Telecommunication Factory] Telecommunication Technology Enterprise

Budapest Radio Technology Factory
United Incandescent and Electrical Corp.
Electroacoustical Factory
Precision Mechanics Enterprise
Telecommunication Materials Factory
Telecommunication Technology Enterprise
Mechanical Laboratory Telecommunication Experimental Enterprise
ORION Radio and Electrical Enterprise
REMIX Radio Technology Enterprise
Telephone Factory
VIDEOTON Electronics Enterprise
Telecommunication Industry Research Institute
Telecommunication Research Institute
Hungarian Telecommunication Technology Association
1451 Electronic Measuring Instruments Factory
Gamma Works
Office Machine Industrial and Precision Mechanics Enterprise
LABOR Instrument Industrial Works
Hungarian Optical Works
MEDICOR Works
MMG [Mechanical Measuring Instruments Factory] Automation Works
METRIPOND Weighing Scale Factory

1451 Instrument Industrial Research Institute
"VILATI" General Contracting and Manufacturing Enterprise for Electrical Automation

Hungarian Instrument Industrial Association
5211 BUDAVOX Telecommunication Technology Foreign Trade Corp.
VIDEOTON Industrial Foreign Trade Corp.
7141 MHE Hungarian Shipping Association Computer Technology and Organization Center

Enterprises and other organs under the supervision of deputy minister Istvan Muller:

1411 Diosgyor Machine Factory
1421 Ganz-MAVAG Locomotive, Railroad Car and Machine Factory
Hungarian Ship and Crane Factory

The employer's rights concerning heads of the enterprises listed below are exercised by the deputy minister. The head of the Main Department for Investment is responsible for providing coordination of professional supervision to these enterprises:

2111 Machine Industrial Construction Enterprise
2231 Machine Industrial Investment Enterprise;
and the head of the Main Department for Industrial Development is responsible for it for the following enterprises:

1411 Machine Industrial Technological Institute
1431 Hungarian Electrotechnical Control Institute
2112 General Machinery Design Office
2212 Metallurgical and Machine Industrial Design Enterprise
5212 HUNICOOP Machine Industrial Cooperative Foreign Trade Office.

This directive will become effective as of 18 December 1979.

Simultaneously with the present directive, directives No 117/1978 (KGK 36) KGK and No 109/1979 (KGK 22) KGM will cease to be in effect.

[signed] Istvan Soltesz, minister of metallurgy and machine industry.

8584
CSO: 2500

INSTRUCTIONS REGULATE TRAINING COURSES OFFERED BY MINISTRY ENTERPRISES

Budapest KOHO-ES GEPIPARI KOZLONY in Hungarian No 37, Dec 79 pp 385-387

[Directive by Istvan Soltesz, minister of metallurgy and machine industry]

[Excerpts] Directive No 123/1979 (KGK) KGM.

Regulation of Training Courses

Directive for the ministry's organizational units, enterprises and other organs (hereinafter: enterprises) under the ministry's supervision.

I order the following for the uniform regulation of training and advanced training by training courses in the metallurgy and machine industry.

I. The Purpose of Taining and Advanced Training

1. The purpose of training and advanced training related to metallurgical and machine industrial activity are that

--the workers of the enterprises should obtain, utilize and periodically expand the knowledge necessary for performing their jobs;
--the general education of the workers should increase and their social and political knowledge expand.

2. Further, training courses may also be organized also in such professional areas where there is no training in schools or organized by top level national authority, or where an adequate number of trained people cannot be supplied within the framework of the training provided.

II. Authorities Related to Training and Advanced Training

1. I assign the directing and implementation of of tasks related to training and advanced training to the sphere of authority of the head of the ministry's Personnel and Training Main Department. Within this framework it is the task of the ministry's Personnel and Training Main Department to

a) direct, supervise and control the training and advanced training in the training course,

b) order and authorize the various training courses involving the ministry's appropriate main departments;

c) approve the topics of training and the number of hours;

d) direct the activities related to test questions and issueing certificates;

e) appoint the chairman of the test committee.

The appendix to this directive contains the detailed rules for implementing these tasks.

I hereby authorize the head of the ministry's Main Personnel and Training Department after preliminary coordination with the appropriate organs and within his own circle of authority to modify the things contained in the appendix and to publish the modifications in the KOHO-ES GEPIPARI KOZLONY.

2. I hereby assign the Institute of Metallurgy and Machine Industrial Advanced Training and Methodological (hereinafter: Institute) to perform the tasks of training and advanced training resulting from the goals of developing the metallurgy and machine industry over the short, intermediate and long ranges, and further, to provide assistance to the enterprises for their training and advanced training work.

The Institute's tasks related to developing, organizing, administering and regulation of the training courses are contained in the appendix.

The Institute is also required to perform the special assignments by the ministry's Main Personnel and Training Department related to training and advanced training.

The Institute is required to publish information in advance for each educational year for the enterprises. This should contain all the important questions related to training courses to be organized in the area of metallurgy and machine industry (enrollment conditions and requirements, start of training, order of testing, etc). The information's content is approved in advance by the ministry's Main Personnel and Training Department.

3. The head of enterprise is responsible for organizing and successfully carrying out the training and advanced training in harmony with the tasks of the enterprise. Thus, it is his job

a) to plan the forms of training and advanced training of training courses, and course enrollments;

b) to insure the proportion of women and young people in specialist and advanced training;

c) to be responsible for working out the plans for training and advanced training, and the necessary conditions for successfully implementing these;

d) to require the cooperation of the enterprise "Education Committee" for organizing the training courses;

e) to define--preferably within the Collective Contract--the conditions and forms of incentives for participation in the training;

f) to furnish authorization for participants of the courses for the training and advanced training relating to the enterprise's area of operation.

The enterprises should request direction in methodology from the Institute for their work related to training and advanced training.

4. The secondary and university level educational institutions may organize training courses only with the concurrence of the supporting organs of the schools (OM [Ministry of Education], Council), and with advance approval by the ministry's Main Personnel and Training Department.

III. Organization of Training and Advanced Training Courses

1. Courses shall be the main form of training and advanced training. With theoretical and practical guidance by the ministry's Main Personnel and Training Department--and with attention to the things contained in the appendix--, training courses may be organized in the area of metallurgy and machine industry by

a) the Institute of Metallurgy and Machine Industrial Advanced Training and Methodology,

b) the enterprise,

c) secondary and university-level educational institution,

d) the Machine Industry Scientific Association.

IV. Types of Training Courses

1. Training courses may be organized

a) to train the workers in basic skills, specialization, supervision;

b) for the advanced training of workers (in journeyman training, refresher courses, updating, to provide additional knowledge, specialization, leadership training, safety, and other types);

c) to train specialists with secondary level education;

d) for the advanced training of specialists with secondary school and certain specialized training;

e) to gain certain job related training, to obtain specialized training;

f) leadership training and advanced training.

Detailed rules for the individual training courses are contained in the information to be published yearly as mentioned in chapter II. point 2., and in the appendix.

...

[signed] Istvan Soltesz, Minister of Metallurgy and Machine Industry

[Appendix]

I. Planning of Training and Advanced Training Courses

1. Organization and implementation of training courses in the area of metallurgy and machine industry will take place under the theoretical direction and control of the ministry's Main Personnel and Training Department.

2. Planning of training and advanced training by training course.

a) The planning of training and advanced training courses is the task of the enterprises.

When their medium-range plans are prepared, the enterprises will prepare medium-range educational plans in which they will make plans for the courses.

The plan must be coordinated with the enterprise's technological development and economic plan objectives. The plan must include the group of people to be included in training and advanced training, its purpose, and its most important topics.

Based on the approved medium-range plan, the yearly educational plans must be prepared every year. In these--in addition to the foregoing--the duration of the training course, personal and objective conditions, and costs must be planned out.

b) The annual plans approved by the enterprise's director, and the statistics must be submitted to the Institute by 31 October of the year preceding the subject year.

The enterprises are required to send a detailed report to the Institute about the fulfillment of the plans by 31 January of the year following the subject year.

3. Starting a course is justified when, as a result of of knowledge acquired in the training course, the work done by the workers contribute to the accomplishment of tasks designated to affect

--increasing productivity and efficiency,

--material savings,

--energy savings,

--raising the technical or professional levels,

--improving quality,

--better utilization of investments and equipment,

--decreasing maintenance costs,

--increasing the safety of work,

--insuring uninterrupted plant operation,

--decreasing actual costs,

--public education,

--modernization of management and organization in the interest of accomplishing projected tasks.

8584
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PROSPECTS FOR INCREASED FRUIT PRODUCTION SURVEYED

Budapest NEPSZABADSAG in Hungarian 2 Apr 80 p 10

[Article by Bela Molnar, director-in-chief of the Fruit and Decorative Plants Growing Research Institute: "Developing Our Fruit Production"]

[Text] The climatic and soil conditions of our country are suitable for growing all kinds of fruits except tropical fruits. However, the erroneous view that our conditions for fruit growing are outstanding should be abandoned.

Our total orchard area is 156 thousand hectares, on which 1.5-1.6 million tons of fruit are grown. Almost one-half of this amount is grown on large farms, and the rest in backyard orchards and on auxiliary farms. Fifty-five percent of the fruit grown in 1978 was added to the central commodity fund by means of [state] purchases, 20 percent served for the personal consumption of the growers, and the rest was sold in different ways.

A total of 10.4 percent of the fruit purchased [by the state] was supplied to the population (over and above the growers' own consumption); 33.6 percent of the government stocks were used by the processing industry; 46.5 percent were exported and 9.5 percent were used for other purposes.

Fulfilling our domestic needs and export commitments poses increased tasks to our fruit growing. Efficiency problems and others hindering economic production make it necessary to objectively evaluate the development of the industry.

Unfavorable Proportions

During the first 4 years of the Fifth Five-Year Plan, establishment of plantations lagged behind, however, at the same time, eradication of orchards was ahead of the plan. The unfavorable proportion of productive and non-productive orchards, considerable deviations in the average yields from year to year and from place to place determine the amount of fruit that can be grown.

Many factors influence the fulfillment of the industry's development tasks. We must take into account that in most cases we are dealing with long-living perennial tree-plants. Their average life span is 20 to 35 years, or 40 to 60 years for ripened fruit trees. Orchards established during the past two decades according to the then prevalent concepts and circumstances of that time are still producing and the effect of past actions can be felt today. On the other hand, newly established orchards will not start producing for many years.

Therefore, our fruit growing industry is confronted with a double task: on the one hand, we must economically operate the existing plantations; on the other, we must continue to establish new plantations, taking past experience and expected necessities into account. The farms should keep in mind that no radical change in fruit production can be accomplished from one year to another, since the results of new plantations and of other measures become evident only gradually.

We must fulfill quality requirements in a greater measure than we have done before, since this is an important condition for the increase of the production of marketable goods. A decisive factor of quality improvement, as well as of the increase of production stability is the correct choice of plantation location.

In fruit growing, climate has a greater significance than soil characteristics. In our country, late spring frosts can cause severe damage to our orchards. Therefore, it is important to take terrain configuration into account from the point of view of whether the orchards are protected from or exposed to frost.

Another important condition for production is an adequate water supply. Due to their large foliage surface area and considerable fruit production, our fruit trees require great amounts of water. The precipitation in our country, especially the seasonal distribution, can only satisfy the water requiremetns of our most important fruits in a few areas. Therefore, more attention should be paid to our irrigation possibilities, since irrigation makes it possible to increase average crops by 15 to 30 percent and at the same time improving fruit quality. By suitably locating our orchards and by taking economic conditions into account, we can make harvesting of larger crops possible on essentially the same area by the turn of millenium.

Mechanization and Organization

Labor shortage causes problems to our fruit industry in many places. When large-scale plantations were established during the 1960's, one of our objectives was to employ the rural labor surplus to increase job opportunities. When the orchards started producing, a labor shortage appeared. The effects of technical backwardness in a production based on manual labor under changed circumstances became more and more evident. There are two labor

peaks in fruit production: pruning and harvesting. Although labor requirements vary by types of fruits, about 70 to 80 percent of the manual labor is employed during the harvest. Mechanization and better organization of labor can help in alleviating labor problems.

Of course, total mechanization of all fruit-growing operations has not yet been solved in our country. Even today, we are using four to five times as many machines and appliances in fruit growing as for field crops. The special machines required are expensive and most of them cannot be used in other areas.

We should keep in mind that mechanization not only reduces live labor, but it is also a cost-increasing factor. Mechanization constitutes 21 to 33 percent of the costs in apple harvesting originally based on manual labor. For stone fruits that can be mechanically harvested, this proportion is 37-46 percent, and for berries 40-42 percent. The investment cost of the machines and its proportion in the cost of fruit production require a more efficient use of technology.

The method of cultivation of the orchards and the height of the trees considerably affect the organization of labor and these factors determine the harvesting productivity of the existing workers. For instance, among the intensive apples crown shapes, all the slim spindle shaped trees, 70-80 percent of the hedge-shaped trees and 60 percent of the branched spindle shaped trees can be harvested standing on the ground.

In comparing harvesting productivity, the slim spindle shape makes 120 kg/hr possible, while the corresponding figures for hedge and branched spindle are 80-90 kg/hr respectively. For stone fruits, mechanization of harvesting further reduces live labor, however, it requires the adaptation of the orchard to such mode of operation. We can further increase the efficiency of live harvesting labor by mechanization and better organization of auxiliary operations such as loading and transportation, which are the growing concerns of our large-scale farms.

Conditions of Profitability

As a result of the economic and financial regulation system effective this year and the price modifications, the material cost of fruit growing has increased 35 percent and the cost of auxiliary operations by 44 percent. The 5 percent labor cost increase should be added to those figures. Special attention should be paid to the development of these fixed costs since these are given for a plantation, while variable costs are proportional to the crop produced. The proportion of fixed costs is especially unfavorable in view of our low average crop yields. The average yield is the result of a combination of several factors: place of growth, cultivation system, variety, growing techniques, etc.

We can make production more profitable in two different ways: either by producing more per unit area or by selling at a higher price. We should put it this way, since some of our plantations have conditions for achieving only moderate average crop increases. Greater efforts should be made by the farms during production, harvesting and processing to improve fruit quality, so that it can be sold at higher average prices. According to our calculations, for a 15-16 tons/ha average production, an average price of 5,500-6,000 forints should be reached to make production profitable.

The factors of profitable production and the economic possibilities should be thoroughly analyzed at each farm, especially since the price paid to the producer only covers part of the increased costs.

Stimulating Small Producers

From the point of view of our fruit supply, it is not irrelevant that 56 percent of the fruit produced comes from small-scale farms. According to our studies, even by the year 2000, 25 percent of the apples, 50 to 55 percent of the pears, cherries, prunes and peaches, 40 percent of the sour cherries and 60 to 65 percent of the walnuts, raspberries and gooseberries can be expected to come from small-scale farms.

Several measures have been taken lately to stimulate small producers, and the effect of these measures can already be felt. Contracting and purchasing enterprises are increasingly providing the financial conditions and the means for production. However, the organized reception and sale of the hundreds of thousands of tons of fruit produced requires more attention. In this respect the role of large-scale producing farms is increasing more and more.

Good organization of small-scale production makes the production increase of labor-intensive varieties and a more favorable development of the variety mix possible.

Basically, the conditions of our fruit industry are determined by currently existing plantations and the expected eradications. By improving the technology and the efficiency of production we can increase our fruit production by 5 to 10 percent as early as the next plan period. On the other hand, the new plantations established in a technically suitable way are creating the foundations for the next decades' fruit production.

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BRIEFS

VIDEOTON NAME CHANGE--The minister of metallurgy and machine industry, by his decision No Ij-1200/1979, has changed the name of the VIDEOTON Radio- and Television Factory, as of 1 January 1980. The enterprise's new name is: VIDEOTON Electronics Enterprise. [Text] [Budapest KOHO-ES GEPIPARI KOZLONY in Hungarian No 37, Dec 79 p 383] 8584

CSO: 2500

1980 EMPLOYMENT, WAGE PLAN OUTLINED

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 4, 23 Feb 80 pp 36-39

[Article by Zbigniew Schulz: "Employment and Wages in 1980"]

> [Text] For many years Poland has been a country of people going to school. Today our country is a country not only of people going to school but also of people who already have an education, and it is high time these people be required to bear fruit, in terms of high labor output, from the education they have acquired and the experience they have gained.

We closed out our economic activity in 1979 with results which deviated from the targets of the plan for that year. It is characteristic that although production tasks were not fully accomplished, in many economic organizations the planned rise in mean earnings not only was accomplished but was even exceeded, and as a result the planned size of the payroll fund met the same fate. This was partially related to the production losses incurred during the first quarter of last year and the need for additional pay for work often performed on overtime, eliminating the effects of a particularly hard winter and of floods. Nevertheless, this additional pay does not fully explain the worsening ratio of payroll fund payments to production. The improprieties are also partly of a subjective nature and are the result of a lack of discipline and the treating of employee income as something separate from the results of the work of the employees and the enterprises. These phenomena are occurring despite the decisions made concerning the discipline to be exercised in the management of the payroll fund through systems improvements and the tightening of administrative and financial sanctions. The failure to follow economic regulations in creating employee remuneration and the related exceeding of the planned payroll fund make worse the market tensions which cannot be eased through additional imports of market commodities beyond those planned, owing to difficulties in our balance of payments.

The Transfer of Labor Resources

The consumption increase envisaged in the plan for 1980 will be achieved, for example, as the result of reducing the share of the distributed national income devoted to accumulations and inveatments. The plan calls for a decline in the share of industrial construction, and, hence a reduction in the production of capital goods alongside a simultaneous rise in the share of housing construction, and the intensification of production of consumer goods and export production.

Changes in the structure of investment outlays, the reduction of the volume of these outlays and the production of capital goods, will make it necessary for shifts to occur in production potential and as a result for shifts to be made in labor resources. Concrete tasks for employment policy for the year 1980 follow from this fact.

The limitation on investments, and hence industrial construction and the production of capital goods, justifies the need to reduce employment by about 93,000 persons in design organizations of the "construction industry" sector, and also in industrial construction enterprises. It seems at first glance that this is a drastic task which will be difficult to accomplish, but closer analysis of personnel movement (fluctuation) in the organizational units of the construction industry shows that it should not be difficult to accomplish, especially if we take into account the fact that fluctuation in many construction enterprises exceeds 30 percent.

A decline in employment conducted in an organizationally rational, good way should bring order to the labor market and exert an additional influence on the organization, discipline, and productivity of construction organizations.

The past spontaneous rise in employment in the construction industry meant that of necessity the construction contracting units also accepted accidental people who did not always have the proper qualifications, and this fact did not fail to influence the cost and quality of the labor. In recent years the shortage of employees meant that despite the wage scales and rates in effect, the employee (not infrequently mediocre) dictated wage conditions, and this was one reason for the slackening of work standards as the result of which they have been an instrument for raising conpensation which had not been justified by the results of one's work.

Properly thought through and organized ordering of personnel levels in the construction organizations and the elimination or great reduction in the number of underqualified, undisciplined, and unproductive workers should create conditions for upgrading work discipline in the broad sense and for activating productivity while at the same time lowering the costs of construction and improving the quality of work. The implementation of

these goals should help upgrade the criteria for assessment of individual employees and the teams and enterprises, on the basis of updated standards and net standards. The improvement of work quality and the elimination of the plague of corrections both when work is accepted and during the warranty periods are an important untapped reserve to increase production and labor productivity in the construction enterprises.

In the industry section a decline of about 11,000 persons is projected in employment. Because employment must rise in such industries as mining of hard coal, power industry, and rolling stock repair plants, as the result of the substantial rise in tasks, the decline in employment in other industries must be greater.

In trade the projection is that the level of employment will decline by more than 6,000 persons. There is some doubt as to the advisability of this enterprise, particularly in view of the fact that the network of shops is not too broad, and there have been permanent difficulties in obtaining and keeping retail clerks, but it must be explained here that the trade sector, like all sectors of the national economy, have to reduce employment of persons engaged in economic administration by 5 percent. The 5-percent reduction in administration in the trade organizations means letting more than 8,000 persons go, and 2,000 of these can be added to the ranks of the retail clerks to improve the operations directly related to trade and service to customers.

The reduction in the employment of administration people concerns not only the economic administration but also the central and local administration. Total employment in various levels of administration will decline by about 37,000. This operation, conducted in keeping with Council of Ministers' Resolution No 132 of 15 September 1978, should be accompanied by the modernization and improvement of organizational structures, mechanization of office work related to taking advantage of the network of electronic computer computation units, the elimination of unnecessary work, and so on.

It should be noted that although in his work Parkinson described and generalized the phenomena of the spontaneous development of administration in the other hemisphere, nevertheless such phenomena are not entirely unknown to us either. The rational execution of the aforementioned points of the Council of Ministers' resolution on the part of the leadership of the various economic organizations and workplaces, along with a penetrating analysis, should restore the proper ratios to employment in administration and basic activity.

At the same time the plan for 1980 projects a rise in employment in the sectors of public health and social welfare, education and upbringing, municipal economy, transport and communications, and also in the sector of physical culture, tourism, and recreation.

In the public health and social welfare sector employment will increase by 16,500 persons, and this is being allocated to staff the newly completed hospitals, outpatient clinics, and other public health installations, and in addition to staff the new work stations needed in connection with the modernization of medical service: the introduction of intensive care departments, including postoperative care, the installation of new diagnostic facilities, and so on.

In the education and upbringing sector, the projection is to increase employment by 4,000 persons, who will be needed in connection with carrying out the school reform program. This program should be supplemented with shifts in slots from the administration to teaching activity.

In the municipal and housing economy, employment will increase by 2,500 persons in activity covered by directive-level indices. In addition, employment in cooperative housing will also double, in keeping with the rise in the number of communities and the increase in the amount of floor space in housing. The rise in employment in housing cooperatives in terms of the rise in residential floorspace and the value of services will mainly concern the teams of craftsmen, maintenance personnel, and supervisors, and is being structured in keeping with the ratified standards in effect.

In transport and communications, employment will increa e by 6,700 people and is being allocated to supplement staffing in the traffic service on the PKP, to staff the increasing number of motor vehicles in transport enterprises, and to bring about a corresponding rise in employment, to keep pace with the increase in vehicles, in the repair units. Employment will also increase in the communications operating services. The personnel levels will be supplemented in the postal and telecommunications offices for what is called "window service," and this will help improve service to customers.

In the physical culture, tourism, and recreation section, employment will increase by about 1,300 persons. Employment in the basic activity of this sector should be additionally bolstered by the amount of required reductions in employment in administrative sections.

The rise in employment is being allocated to staff the newly completed sports and tourist installations. In this sector there are also great employment reserves to be found in the overexpanded network of various enterprises and organizations, especially tourism and recreation ones, which often duplicate each others activity. Despite undoubted progress in the development and organization of domestic and foreign tourism, there are potential sources for reducing costs and improving the effectiveness of tourism enterprises to be found in bringing further order to the activity of the various units and eliminating the unprofitable units.

The targets for the 1980 employment plan presented so briefly show that the shifts in employment have been subordinated to the goals of coordinating

the further development of the national economy. The planned employment changes are a derivative of intersector and interbranch structural changes.

Work Discipline

Increased management efficiency called for both in the Resolution of the Eighth Party Congress and in the provisions of the resolution on the National Socioeconomic Plan for 1980 requires improved management of all production factors, especially the rationalization of employment. Many areas of the economy have hidden within them substantial employment reserves going back for years during which we "utilized our rapidly growing labor resources." In the 1980's we are entering a decade of diminishing increases in labor resources under conditions where labor shortages are becoming worse in many local labor markets. This shortage often is a threat to the accomplishment of socioeconomic tasks. This fact is forcing us to combat the manifestations of waste which still occur, for example, in the remaining and even rising employee absence rate, excessive fluctuation, and improper use of working time.

In order to present an idea of the dimensions of absenteeism and its results for the functioning of the economy, it is worth pointing out that each day, the number of persons absent from work amounts to about 10 million people, and this does not count people on vacation leave. These are absences which are both justified and unjustified, but this does not alter the fact that absences withdraw from the work process nearly one out of every employees in the socialized economy, and this does not and cannot fail to have an influence on the organization and work results both in the production sphere and in the sphere of broadly based services.

Another problem is that of excessive turnover, which goes up to 20 percent in industry and 25 percent in construction. These figures mean that statistically speaking, in many workplaces the whole staff of employees turns over in industry every 5 years and in construction every 4 years. In other sectors of the economy the turnover indices are lower, amounting to about 10-15 percent.

Excessive fluctuation and changes in the place of employment cause certain social harm stemming from losses of time related to settling up and leaving previous places of work and obtaining a referral, taking care of the formalities, and coming to a new place to work. To this one must also add the time needed for the employee to adapt to the new conditions, to get to know superiors and fellow workers, the principles of organization, and so on. This is a period in which the employee finds himself in a specific phase of "mobilization" in which his output is correspondingly lower. These periodic declines in the labor productivity of "wandering" employees going from one workplace to another represent a concrete loss of service or production value.

Hence, we should view limitations on fluctuation as means to permit substantial improvement in the utilization of working time and in making that time more productive. In the fight against excessive fluctuation, the existing instances of walking off the job, which are particularly detrimental, need to be treated in particular. Walking off the job demonstrates exceptional lack of responsibility and merits severe sanctions in terms of both the economic and social-upbringing consequences.

...and Employment.

Given the rising labor shortage on local labor markets, it is becoming necessary to tighten up the methods for planned distribution of available labor resources and the introduction of economic sanctions for failure to follow the regulations regarding the management of labor resources. With this in view, the resolution on the National Socioeconomic Plan for 1980, for example, requires that "subordinate enterprises and workplaces accept only those employees referred by appropriate employment bodies; in the event an employee is hired without having been referred by the Employment Office or the permission of local bodies of the state administration, the planned personnel payroll fund is reduced by 50,000 zlotys; in the event that the person hired without being referred is an employee who just walked off the job on his own, the amount of the reduction will be 150,000 zlotys." These sanctions will be applied regardless of any other administrative sanctions which are applicable. The provisions introduced should be applied universally, without the so-called special rate for certain workplaces. The more responsible a plant or workplace is, the greater discipline and order should be shown, because these are the conditions to proper utilization of productive factors, to production and service quality, and to the meeting of planned schedules for tasks.

In order to bolster control and supervision over the implementation of the targets of the National Socioeconomic Plan, the ministerial and voivodships officials have been charged with dividing tasks and resources up into quarterly periods, with consideration given to the individual elements of the plan and the specific features of sectors and branches. Once these plans have been ratified and accepted, they will be filed with the banks and will serve as the basis for financing and clearing in 1980.

Improved implementational discipline in carrying out the plan depends on the updating of a broadly conceived base of standards in the national economy. During the 1970's Polish industry achieved enormous progress in engineering, technology, organization and management, and so on. This is another quality which is expressed both in the scale and structure of production and in the means of production and the qualifications of people. These changes call for the appropriate updating of standards which, according to their propriety, are conditions to the proper utilization of new machinery and equipment, raw materials and other materials, power and energy, and labor resources, and what overall determines the effectiveness of social production and the level of consumption. The random inspections conducted in this area show that individual subbranches and workplaces here have a

a great deal to do, and also that without a current standards base there can be no efficient, effective administration and management. It should be remembered that Council of Ministers' Resolution No 59, dated 13 May 1978, put in order the organizational issues concerning work standardization, but the resolution's instructions have not always been met with sufficient understanding. On the basis of the regulations of the resolution concerning the National Socioeconomic Plan, the instructions in the resolution of May 1978 are becoming especially timely, and their implementation should be judged in direct conjunction with the execution of the tasks of the plan.

Effective Management of the Payroll Fund

The plan for 1980 projects a rise in mean wages in the socialized economy by about 6.9 percent. This increase is made up of the following:

Effects of wage increases made in 1979 carried over to 1980 -- 2.6 percent

Anticipated increase in minimum wage, effective as of 1 January 1980, that is, to a level of 2,000 zlotys -- 0.9 percent

Pay for increased labor productivity and required promotions -- 2.4 percent

In 1979 wages were increased in certain sectors of the national economy in order to change earnings ratios, to eliminate or reduce imbalances which had occurred in wages, and to create conditions for obtaining employees needed to do particularly difficult, noxious or even dangerous work. For example, wages were increased in hard coal and metallic ore mining, in metallurgy, in light industry, in the chemical industry, in transportation, and in communications. The financial impact of these increases, which were made in various periods last year, has been shifted to this year. For example, the wage increase introduced as of 1 July (beginning the third quarter), which cost 100 million zlotys in 1979, will make it necessary in 1980 to increase the payroll fund paid out in 1979 by another 100 million zlotys to cover the increase in pay during the first half of 1980. The effects of the decisions to increase wages, as adopted in 1979 but carried over to 1980, commit about 2.6 percent of the rise in the planned mean wage in the socialized economy.

Unlike previous years, in which the minimum wage was increased on Labor Day, that is, 1 May, the current hike is being made as of 1 January. The change in the schedule of the rise in the minimum wage was designed to place this target against the background of the entire annual wage policy and to take into consideration the effects of that operation in terms of the targets of the plan.

In order to avoid misunderstandings, until the implementation of the increases in the minimum wage and full settlement of the financial effects of this operation, all other promotions and reclassifications have been suspended, by virtue of the resolution on the National Socioeconomic Plan for 1980. This should insure that this increase receives the proper rank and priority, and at the same time should provide for proper discipline in calculating its costs in terms of the funds and tasks of the plan. It should be emphasized that in distributing funds for the increase in the minimum wage, the structure of earnings the previous year was taken into account. Because over the period of the year earnings increased throughout the entire economy, the share of minimum wages decreased. From this it follows that the various organizational units of the plan obtained funds for an increase in minimum wages sufficient to cover absolute needs and even have some left over. It is obvious that if the management of individual plants comes out with a rise in the minimum wage in excess of that projected, then it must assign to that purpose funds which had been allocated for other purposes, like promotions, reclassifications, and the payment for increased labor productivity, for which 3.4 percent has been projected throughout the entire socialized economy.

Altogether, as has already been mentioned, average wages in the socialized economy will increase by about 6.9 percent in 1980. The greatest increase in average wages is to occur in industry (8.3 percent), followed by transportation and communications (6.8 percent) and trade (6.1 percent). The highest level of average wage in 1980, will be in the construction industry, where annual earnings will be 69,560 zlotys. This level explains the 4.8-percent rise provided for in the plan for the mean wage for this sector of the national economy.

Raises and Bonuses Have to Be Worked For

In an article one has to operate with mean sizes which are composed of the minimum wages and sometimes very high wages. Both the one and the other can be worked for straightforwardly, or else it is possible to have a situation in which it all happens on the basis of "whether you are standing up or lying down, [you get paid either way]." It should be the task of the management at the workplaces and also the concern of political and social organizations to see that compensation is not paid when it is not worked for and merited. It is an indisputed fact that pressures on wages and their growth last and become stronger. We are adopting consumption models of countries which are more advanced and richer than ours, countries in which nevertheless the standard of living depends on labor productivity and effective management. In understanding these obvious relationships between the quality of work and earnings, these awakened aspirations which our society has should be and can be utilized as a strong impetus for increasing our economy's productivity and development.

There is only one condition, and it is an absolute one: earnings and increases in earnings must be closely related to labor productivity which in particular takes qualitative aspects into account. And conversely, all unmerited upgrading-for compensation which is paid on the principle of the "long pencil" reduces employees' morale, causes work discipline to disintegrate, and lowers labor productivity. Attention should be given to the destructive influence which such compensation has on hard-working committed people, especially young people, who are usually good observers who draw specific conclusions from their observations. If we add to these comments that each system can be dismantled quite quickly but that organizing it and putting it in order demands great time and effort, then the conclusions come on their own and with compelling force set the tasks for management supervision and social professional organizations in carrying out the tasks of the plan for 1980.

Against this background we should also pay attention to the role of bonuses in the wage system and the nature of this compensation as an economic category related to awards for the results in economic activity. Full achievement of planned tasks is grounds for using the bonus fund to pay in recognition of the accomplishment of these tasks, but if for some reason these tasks are not fulfilled, then the economic foundations for paying these bonuses are missing. I am emphasizing the phrase "for some reason," because these causes are immaterial insofar as the failure to accomplish the tasks goes, and it is a fact that the production or service effect is below that planned. If there are so-called objective causes (natural disaster, breakdown, and so on), then they can be considered to have been explained in the sense that nobody is called to account in the administrative course for failure to carry out planned tasks whose repercussions for the national economy may be very serious. On the other hand, this is not and cannot be justification for paying a bonus, because the right to it occurs only after the achievement of the planned tasks which represent the economic condition for paying it, not merely the formal condition.

In other words the saying "we work for the basic wage and we play for the bonus" also applies to us employees of the management and administration of the enterprises and economic organizations, as well as to the management at higher levels right up to the central management inclusive, which is interested in carrying out planned tasks and even in exceeding them in certain parts of the plan. The adoption of such an unequivocal principle should mobilize groups of employees of management and the administration to the maximum, inspire them to carry out the tasks of the plan and not allow them at the same time to even think about paying a bonus on the basis of justifications or reasons for failing to carry out the tasks owing to objective factors.

Omitting the pure "subjectivity" of these "objective" causes and difficulties and even the impossibility of overcoming them, the payment of bonuses and often awards for tasks not carried out has not economic foundation. It demobilizes the workers, and it breaks down the incentive system which is

contained in the wage principles, and this fact has adverse consequences for labor productivity and management effectiveness.

Maintaining the Ratios of the Plan

Alongside the problems in the realm of the microeconomy and discipline in managing the payroll fund, there arise macroeconomic problems related to ratios of the plan, its implementation, and the creation of the payroll fund. Because of poor implementation discipline and the tensions arising therefrom, for example, in balancing the cash expenditures and income of the population, the resolution on the National Socioeconomic Plan for 1980 limits corrections in the payroll fund to the exceeding of planned tasks in the realm of market and export production. Because of the need to maintain the ratios of the plan, it is counterindicated and even detrimental to exceed production for investment purposes. This is not the basis for making a correction in the payroll fund. It follows therefore that any exceeding of the production plans for investment purposes which bring about payments in excess of the plan are treated as instances where the payroll fund is exceeded in terms of the regulations on bank supervision of the payroll fund.

According to the exceeding of the planned tasks, a correction is made in the payroll fund in relation to market production and services rendered at full fee on behalf of the population, because this follows from the fact that any added production or service, if it is profitable and has a buyer, acts to strengthen market equilibrium, because it enriches the supply and ties up more of the population's cash resources than were paid to produce it.

The situation is different with the production of investment goods, because exceeding the plan here creates a rise in employee pay which is not covered by additional supplies of goods or services bought by the population. Similar effects for the market balance are created by construction investments in excess of the plan which are related to expansion of the investment front and a rise in the value of funds tied up in unfinished buildings. Because the share of the value of construction and installation which is devoted to labor runs around 17-18 percent, it is not difficult to see that each billion zlotys of construction-industry production above and beyond the plan causes a payroll fund payment on the order of 175 million zlotys. This amount would have to be added to the payroll fund needed in the production of additional materials used for the construction-industry production above and beyond the plan.

The above-mentioned problem of disciplined realization of the type structure of the plan for production is a crucial problem which defines the basic ratios and balance of the plan.

The resolution on the 1980 plan limits expenditures from the nonpersonnel payroll fund by 2 percent compared to the amounts paid out of this fund in 1979, and it stabilizes planned costs of business trips to the level of last year's expenditures. Compared to 1979 the number of overtime hours worked outside of continuous operations should decline by about 10 percent. When we consider that it was the especially difficult weather conditions last year which caused many such expenditures, we can see that these reductions should not be noticed under normal or nearly normal conditions of work.

This year's economic plan gives prominence to the problems of effectiveness. Its implementation should run under the slogan of rationalizing management in all sectors of operation. These targets are built up with various types of rewards for results in achieving planned effectiveness and making further improvements in it. This pertain, among other things, to awards for results in foreign trade, and for savings of fuel, energy, and also raw materials and other basic and auxiliary materials.

The precise formulation of effectiveness tasks and their measurement, linked to in-depth quarterly analysis and assessment of the effectiveness of operations of economic organizations and ministries, and the additional incentive of awards, should insure the execution of planned tasks in 1980.

Higher productivity and effectiveness of management is the supreme task of the economy at the present stage of its advanced development. A great deal, more than ever before, depends upon the implementation of these tasks and on having management which provides a comprehensive expression of improvement in the form of lower costs.

10790
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1980 CONSTRUCTION PLAN OUTLINED

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 4, 23 Feb 80 pp 9-10

[Article by Adam Glazur: "Construction in the Year 1980"]

[Text] The production activity of the construction industry was structured in the plan for this year in keeping with the tenets of the National Socio-Economic Plan for 1980, taking into consideration both the internal and external conditions for the further development of our national economy. In specific terms, some reduction of a few percent has been made in the overall sizes of planned construction and installation production to a level below that achieved in 1979, owing to the limitation on the share which investments will have of national income and the restriction on their size in absolute terms.

At the same time the changes made in the structure of production in the construction industry were further and more extensive than in previous years. Construction potential has been directed first of all to carry out the investment tasks included in the preferential program resulting from the strategy for our country's socioeconomic development.

In nonproduction investments these priorities still are applied to housing construction along with the municipal infrastructure of housing developments and certain areas of social activity, especially public health. Among production investments, the developmental priorities are related to the task of expanding and modernizing the power industry, coal mining, rail and marine transportation, and small-scale production tasks.

Targets of the Construction Industry Associations

As the result of these changes, a group of general construction associations have been given higher production targets for this year than those achieved in 1979. On the other hand, lower targets have been assigned to industrial and specialized construction associations, and in some associations the extent of the reduction in tasks is significant.

In the general construction associations we have provided for a sufficient rise in production potential and targets to carry out the actual increase in housing construction to 11,140,000 square meters of utilitarian housing floor space (this is more than 300,000 square meters more than in 1979). The extent of the increase differs from one region to another. It is greater particularly in certain large urban-industrial centers. This is making it necessary to shift to these centers both a certain number of employees and material specified in the plans of individual contractor units and to direct to these areas deliveries of prefabricated construction products from other regions of the country.

Consideration in the targets for general construction associations was also given to the plan's projected doubling of hospital production compared to 1979.

Provision has also been made for the conditions essential to bring about a decisive improvement in the level of development of the urban infrastructure, which will make it possible to reduce parallel efforts in carrying out the construction of buildings and work related to land development.

The planned targets of the general construction associations also create the possibility of maintaining the construction of basic social and service facilities in urban settlements and the construction of nurseries, preschools, boarding schools, college dormitories, and other installations for public use on a high level. The necessary contracting potential has been provided for these goals in the labor balance-sheet.

In the industrial construction associations we are using the reduction in the investment front to increase the concentration of construction potential on a smaller number of sites under construction. We are focusing on those investments which are particularly important to the national economy and on other tasks included in the above-mention priorities, and those projected for completion during the year 1980. Because of this these tasks should be accomplished more quickly, given a relatively lesser commitment of means of production and other resources.

We are still enlisting the industrial construction associations in carrying out general construction tasks, especially in the construction of facilities of the technical infrastructure and contracting for the so-called zero state in apartment buildings, that is, for work in which these units' potential can be most effectively utilized. Part of this potential will also be utilized in the growing exports of the construction industry.

The production capacities of the specialized associations will be utilized to the maximum extent in modernization investments.

The Results of the Entire Decade Depend on the 1980 Results

We are attaching special significance to the full implementation of this year's tasks. This is the year which ends the cycle of program tasks for the current five-year period and the entire decade of the 1970's. At the same time this is a period in which we must perform the neccesary organizational and technical work upon which depends the implementation of the tasks set for the next five-year period for the construction industry by the Eighth PZPR Congress. Despite tremendous difficulties in implementation, the year 1970 was drawn to a close with relatively good results in carrying out the actual program of the construction industry.

The construction ministry's execution of the housing construction tasks set down in this year's plan will create real possibilities for taking full advantage of the basic housing construction program set for the country for this five-year period, assuming that the other contractors of this construction carry out their duties at their end as well. This is creating great opportunities for obtaining substantial results in this sort of construction, as the result of the past investment effort. The following should be noted in particular:

The construction during the 1970's of more than 2.6 million dwellings in our country and provision for about 9 million persons to improve their housing conditions substantially as a result,

Between 1970 and 1980 the doubling of the number of dwellings constructed in a year,

Decline in the housing density index from 1.33 persons per room in 1970 to 1.06 in 1980,

Elevation of the standard of dwellings completed and turned over for use. The mean floor space of dwellings increased from 44 square meters in 1970 to 52-53 square meters in 1979-1980. All the dwellings completed were outfitted with basic water and sewage systems, and most of them also had installed central heating and gas.

We also have real possibilities for carrying out in full the plan set for the five-year period 1976-1980 in the second, the next, socially important sector of construction, that is, the building of hospitals, and in addition in certain other sorts of general and production-service construction.

New Organizational Solutions in Housing Construction

The general targets of the plan for 1980 and the type and size of the pr duction, actual, and financial tasks set imply the necessity of resolvi number of problems both in the construction industry and in the b g materials industry. First of all it is essential to strengthen

construction potential and to base our activity on strong, effective organizational units.

The construction combine fully equipped with the means of operation to permit comprehensive execution of the tasks entrusted to it will be the basic organizational unit to accomplish housing construction. Hence, such combines will be appropriately equipped with the means of production necessary to carry out engineering and plumbing tasks. Their production capacity will also be appropriately expanded.

The prefabricates production base, which determines this production capacity, was expanded through many years of effort and an enormous outlay of funds, to the point where there are now 142 plants which turned out production amounting to 8.8 million square meters of floor space. By the end of 1980 we will increase the number of active plants to 159. This year we will obtain from them prefabricates for 10 million square meters of floorspace for housing.

The construction complexes will be provided with expanded authority to meet the conditions which the new self-financing system requires. This will also mean an increased sphere of responsibility for the combines with regard to accomplishing the planned production and economic tasks.

Alongside the creation and expansion of engineering potential in the construction combines, the potential of the urban engineering enterprises will also be expanded to accelerate the overall land development of areas and the construction of main heating system networks. Subbranch enterprises from the industrial construction associations and the specialized associations will also be directed to perform this work to a greater extent than heretofore.

Alongside the introduction of more effective organization and the bolstering of contracting potential, emphasis will be placed on further improvement in construction quality, especially in housing. The efforts will be focused largely on improving the quality of construction components by increasing the extent of factory finishing, the introduction of new materials with high technical and utilitarian parameters, especially insulation materials, and the upgrading of other finishing work on the components which are produced in the plants. Quality control within the plant will be improved, in order to prevent the possibility of allowing prefabricates with defects to reach the building site and to bring greater consistency to the application of the system of sanctions for violating quality standards.

We are paying a great deal of attention to the full inculcation of builders' certificates in housing construction. They are a sort of guarantee card for the teams which perform the various sorts of work in the installations. In this way, for example, we intend to achieve a higher level of discipline and responsibility among construction employees for the quality of their own work.

We consider it particularly important to reduce the heat conductivity factor in the exterior walls in large-panel construction. In this area we are placing great emphasis on the application of better design solutions, materials with high insulating ability, door and window construction with greater tightness and thermal insulation properties, and more careful execution of construction work.

In housing construction we want to achieve a fast rate both in carrying out the work and in signing the buildings over for use. This applies both to the current program and, particularly, to the preparation of conditions for the effects to be achieved in housing construction in 1981. By the end of this year we want to achieve at least a 20-percent lead in the installation and erection of these buildings for these effects.

We tie this problem in closely with the need to accelerate deadlines for giving contractors access to construction areas and supplying the necessary design documentation. In cooperation with local officials and investment services, we will try to eliminate the delays occurring in this area and achieve the desired progress. This will create conditions for a high concentration of work and the effective utilization of contracting potential, because the lack of preready developed land is a grave complication in putting up residential structures, and this fact creates delays in construction, increases in costs, and poor quality.

The next important task is the preparation of design documentation. Here the design bureaus face difficult tasks. The dimensions of the tasks of housing construction and the technical infrastructure call for intensive, accelerated design work. Here it is the task of the design office people to design housing complexes in a way which will best suit the needs of the residents, be convenient and comfortable for them, and provide them with a sense of beauty, with consideration given to the optimal use of production capacity of the construction prefabricates production base. Here we must also see to provide communities with the necessary social and municipal infrastructure and to accomplish the whole design job with a thought for the growing requirements of the residents and the needs of future generations.

Therefore we are emphasizing the need for high quality and functional utility in the dwelling units, the development of services rendered within the immediate neighborhood, the provision of good transportation, and participation in cultural life, with possibilities for recreation and sports.

Industrial Construction

In industrial construction, given the reduced size of investment tasks, we are working on adapting the organization of the associations and the structure of the network of enterprises to the new conditions. Appropriate action has also been taken for the more even distribution of production over the entire year, without the backlogs during the final quarter. This

applies first of all to those investments which are particularly important to the national economy. We want to increase the number of these investments turned over for use during the second and third quarters of this year, accelerating the construction in relation to the schedules planned for the fourth quarter.

In carrying out all the tasks the contracting enterprises will be guided by a basic principle, the achievement of the goals set in the actual program, with greater economic effectiveness of the resources available. This should be expressed mainly in increased labor productivity. This is the reason for our attaching more significance to the management of work, and the link between the size of earnings and the work performed, and the adherence to work discipline.

For construction and installation enterprises, a 6.5-percent increase has been planned for this year's labor productivity in relation to 1979, but taking into account the changes in the structure of tasks and the differentiated level of productivity achieved in the various sorts of work, the comparable increase in labor productivity needed will actually be about 8.5 percent.

As the result of the planned rise in labor productivity and the reduction in the sizes of production, employment in the construction and installation enterprises will be reduced. The scale of the reductions varies from one association and region to another. Efforts are being made to adapt real employment to the planned level as soon as possible. Measures are also being taken at the same time to upgrade the level of work discipline. A modern complex team system of management related to self-financing is being inculcated on a broader scale. This should provide for construction tasks to be carried out on schedule, for good production quality, and for thrift in the consumption of materials.

Improving the Supply of Materials

In 1980, using a better balance of production tasks with the resources allocated for their execution, we will insure improved management of materials for the construction industry. Reciprocal deliveries of materials from both the ministry's own production and other industrial-type ministries will be accelerated.

It is also necessary to accelerate the development of the production of locally derived materials, including especially the use of local natural aggregate resources, in order to supply the production units of the construction industry better. This in turn will relieve the railroads and motor transport of transport tasks which are presently not always rational.

Despite the decline in the construction and installation production, in the building materials industry the targets for product sales for 1980 have been set at 118.5 billion zlotys, that is, 5.4 percent higher than in 1979. Here we must achieve a dynamic increase in market deliveries

(an increase of 11.9 percent) and in export deliveries (an increase of 22.4 percent).

An especially high rate of production growth is being applied to insulating and roofing materials and to other materials needed for private construction. For example, the production of mineral wool will increase by 22 percent, and the production of roofing paper will increase by 19.5 percent, while there will be a simultaneous improvement in quality. The production of bricks will increase by 12 percent. The production of asbestos cement will rise by 13 percent, and cement will increase by 10 percent.

There will be a priority on deliveries for housing construction and deliveries to meet market and export needs.

We shall insure that housing construction contractors and general contractors receive priority for deliveries of building equipment and machinery, as well as vehicles. In this area contractors have been given the task of improving the use of the machinery they have and with best possible management of fuels and power in this connection. We are placing the emphasis on better use of machine operating time, including expanding the application of shifts, a concept which is not being adequately used at present. To this end improvements are being made in the organization of building production. We are expanding the application of compressed operation of diggers and dump trucks and other effective systems for the comprehensive mechanization of work. We are still expanding the base for repairing building machinery and equipment.

We are well aware of the fact that the plan for 1980 is not simple. In particular it involves important changes in the regional and type structure of production, changes which will require substantial organizational effort. The plan also implies important tasks in expanding the effectiveness of operations and raising the level of economics, tasks which call for tightening the discipline in the management of the means of production and very effective management of the human labor potential.

Overall we can say that these tasks imply the necessity of increasing the work quality of all our organizations, both in construction and in the building materials industry.

The have covered the basic problematics of the plan in the ministry's program of operations. In it we have defined the concrete goals of the actions undertaken. We have determined the contractors and the schedules for execution. The appropriate information and instructions have been sent to the working forces and have been discussed with the workers' self-government organizations. In this way we have insured the cooperation of broad groups in solving complicated production, technical, organizational, and economic problems which the plan for this year involves. This is the most certain guarantee that its tasks will be successfully carried out.

10790
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FOREIGN EXCHANGE REVENUES FROM AUTOMOBILE EXPORT NOTED

Warsaw ZYCIE GOSPODARCZE in Polish No 11, 16 Mar 80 pp 1, 13

[Article by Andrzej Lubowski: "The Foreign Currency Hunt of Zeran"]

[Excerpt] Let us spare ourselves both an interpretation--for God knows time and again of the exceedingly powerful need today to export and the benefits which may flow from it,--and a reminder of the state of the balance of payments and the strength of demand for imported goods.

Let us accept the fact, that the POLMOZBYT [Polish Automobile Sales Center] clients, who made prepayments for Polish Fiat 125-P's several years ago, and are waiting in vain, are not going to be very happy about this, and let us accordingly accept the fact that today the export of automobiles is indispensable for us. Without entering into a debate over what would happen if we were to abstain from this export--whether and to what extent prices would fall on the [used car] exchange and whether and when POLMOZBYT would meet its old obligations--let us have a calm look at the facts regarding the operations of the Warsaw Passenger Car Factory (FSO).

Almost 70 percent of the output of the Zeran plant is sold for currencies other than zlotys. I am speaking of the sales for foreign currencies, and not of the actual transfer of goods abroad; for a considerable part of the FSO's export constitutes internal export [i.e., domestic sales for foreign currency]. Last year the value of FSO exports came to 724 million foreign exchange zlotys, which represented almost 1.5 percent of our total foreign currency revenues. The export plan of the factory was not achieved, even though the output plan was overfulfilled. Almost 6,000 cars more than planned were sold domestically for zlotys.

Goods valued at 223 million foreign exchange zlotys went from Zeran to Payments Area I. Of the remaining 501 million foreign exchange zlotys of sales accounted as exports to Payments Area II, 238 million zlotys were sales in internal export. What made these foreign currency receipts?

The largest position was provided by the Fiat 125 p. A total of 52,783 units of this car were sold. Engineer Jan Salomonczyk, the factory's deputy director for output, export and sales, supplied me with this information.

and he is scrupulous with figures. Out of this total, 7,500 cars went to Payments Area I and about 21,000 into internal export. We sold the "Polonez" only for hard currency and coupons--altogether 14,633 cars, of which 5,070 went into internal export. To this must be added 860 "Tarpans"; almost 1,900 Fiat 125 p car kits exported for assembly abroad, and 8,000 cars assembled in Poland from imported kits and sold as internal export (overwhelmingly Zastavas, with Fiat 131s and 132s making up the rest), as well as spare parts whose export has recently been rapidly rising.

An ever larger part of the exports from Zeran goes to the countries of Payment Area II. The most important customer is the British market: last year it took 11,000 cars, among them 3,000 "Polonez" models. Other significant customers are (with the number of "Polonez" cars (in parenthesis): France--2,600 cars (1,500); Greece--2,000 (only 300 "Polonez" cars and at least 1,000 pick-ups); the Netherlands--1,500 cars (1,200); Egypt--1,200 (only Fiat 125 p's); Finland--1,000 (500); Belgium--750 (450); Denmark--600 (only Fiat 125 p's). Several hundred cars each went to Ecuador, Panama, Costa Rica, Guatemala, Jordan, Kuwait, Cyprus and also to China, which wants to buy more of our Fiat 125 p's and pay for them with Swiss francs. Polish cars last year went to 32 countries by way of reexport (with Britain as the intermediary)--to those areas where for one reason or another our traders could not do business.

We sold about 500 "Polonez" cars to the Federal Republic of Germany. Though it is true that a test published by STERN was not especially favourable. The objections among other things concerned the excessive weight and the relatively high fuel consumption. The people at the FSO say that the entry into this difficult market was altogether satisfactory. The consortium of 36 dealers selling our cars in the FRG gave particularly high marks to the sumptuous outfitting of the newest Zeran product.

The Polish citizen who curses this export, in the conviction that it postpones the moment of his acquisition of his Fiat or Polonez, is seldom aware of the fact that this same export has the effect of raising the quality of his much-desired four wheels. On the world automobile market conditions are dictated by capricious customers who are not forced to wait for years or compelled to court Mr Henry of the POLMOZBYT station with seductive smiles. The requirements of the majority of foreign markets are rising precipitously, and our producers must adapt to them whether they want to or not. And since it is the same people who produce cars "for home" and "for export" on the same production lines, the zloty purchaser also benefits from this momentum.

Does this mean that the Fiat 125 p sold for Polish National Bank notes differs in no respect from the same car purchased in Paris, Brussels or Kopenhagen? It would be closer to the truth to say that it differs practically in no respect. For England, obviously, the steering wheel will be on the right-hand side, and M Chardonnet, who sells Zeran products in France, will equip them with his own wheels, shock absorbers and batteries; but the differences are minimal in the majority of markets. To an ever greater degree our Fiats travelling on foreign roads are truly Polish products. Only a few years ago

an Italian clutch was still being installed in the export version, and the starter and pistons were imported products. Today the clutch comes from Poland, and a small foundry in Gorzyce has rapidly mastered the production of suitable pistons. This leaves the starter and the gaskets. Time and again the FSO has approached the chemical industry and begged for gaskets which will correspond not only to the Polish norms but also to operating conditions.

Information and opinions on the product flow systematically to Zeran from all the most important markets. From the English market, for instance, a list of the 20 most frequent faults arrives each month. And this is not just art for art's sake, since in the course of a few years the warranty costs per car in this market have declined by 50 percent and now amount to £49 (approximately $110).

The Polish produced car exhibited at the Frankfurt/Main salon next to the products of the world's great has no worse a paint finish than the others. And here again: a single painting shop works for both "home" and export production which is one of the reasons why lately complaints about the paint finish have abated.

Prices. The fact alone that in Western European capitals one must pay about $6,000 for the Fiat 125 p, while in internal export POLMOT commands $2,900 for the same car, does not really tell much. From the point of view of the Polish treasury what matters is how large our net revenue is. And the difference between gross and net is substantial. It consists of custom tariffs, transport costs, advertising, profits and taxes of the importers, and the like. In no market do we obtain less than $2,000 for the Fiat 125 p, but rarely do we get more than in internal export. It would nonetheless be a crude error to draw the conclusion from this that all automobiles should be sold as internal export, if only for the reason that the coupons, by means of which our countrymen working on construction sites in Czechoslovakia, the USSR, the GDR and Hungary buy their automobiles from POLMOT, do not provide the means to settle the obligations which Bank Handlowy (Commercial Bank) has incurred with Western banks.

Last year POLMOT began to apply new rules for price increases in exports, following the longstanding example of practices employed by many competitors--of small, but regular price increases, which are easier to accept by the clients, twice yearly. It is obvious that in the battle for prices, the fewer complaints the market has about the product the more one can gain. Slippages in delivery dates, errors in color tones, not to speak of greater sins, reduce the chances of obtaining larger increases. In 1979, the prices which we obtained for automobiles from Zeran were on the average 6-7 percent higher than a year earlier. This year the FSO wants to earn more than 30 million foreign exchange zlotys from price increases alone.

How much Zeran contributes to the state foreign currency treasury obviously depends not only on the price for which it sells its products, but also on how much foreign currency goes into their production. A precise calculation

of this is exceedingly difficult, if not impossible; it would require accounting also for the import-intensity of the production of sheet metal for car bodies and plastic materials and whether and to what extent imported raw materials are consumed in the production of automotive paints, and so on. If we limit ourselves to accounting at the level of the car factory alone, it appears that the positive foreign currency balance has been growing systematically. In 1978 trade with Payment Area II amounted to 304 million foreign exchange zlotys and to 418 million foreign exchange zlotys last year. The average net foreign exchange revenue in sales of the "Polonez" was 47 percent higher in 1979 than that obtained from sales of the Fiat 125 p. Hence the surplus will grow to the extent that the share of the "Polonez" in total exports of the FSO increases.

As in the case of almost every one of our plants, discussions on the topic of export profitability are not easy. This is not because the management of the factory is deliberately concealing something, but because so many factors distort this accounting, even if we put aside the imperfections of our domestic prices.

The FSO deputy director for economic matters, Jan Burchard, speaks with bitterness about the profits which each of the subcontractors racks up for himself. The pyramid which arises in consequence of this raises the costs of production. Theoretically, far-reaching specialization ought to have the effect of lowering production costs. In practice, however, the result is different--each additional link in the chain of cooperating units costs the producer of the final product a substantial amount and also obscures the true picture of the profitability of exports.

Let us consider the matter of quality emblems. A subcontractor who has gained a "One" raises his price by 5 percent; and if he has obtained a "Q" his price goes up by 10 percent. These "Ones" and "Qs" will cost the Zeran factory 55 million zlotys this year, thus lowering the profitability of exports. The FSO economists consider the awarding of quality emblems to automobile parts a mistake. Their quality is expressly defined by design and technological norms. "Let them work no better and no worse" says Director Burchard. "Our subcontractors have these quality emblems included in their directive, and we pay for it."

It can be assumed that these questions will assume an additional acuteness when the new export promotion rules take effect for selected enterprises and associations, to make the level of rewards dependent on the profitability of foreign exchange transactions.

This year's plan for the Zeran plant assumes exports valued at 1,050 million foreign exchange zlotys. About 800 million foreign exchange zlotys of this represents exports to the Payment Area II (together with internal exports), composed primarily of sales of 39,000 Fiat 125 p's and 37,500 "Polonez" cars. In the FSO they say that this is a realistic plan which is already almost fully guaranteed by contracts. The British market alone will take about 20,000 automobiles, which will constitute almost 10 percent of the entire Polish exports to Great Britain.

A tremendous jump is in preparation in the foreign sales of Zeran car kits--from 1,900 units last year to almost 6,000 in the current year. The largest part of this will be made up of Fiat 125 p's, for close to 3,000 of these will be assembled in Egypt. Other assembly plants are located in Columbia, Ireland and Malaysia. In Thailand, 500 "Polonez" cars will be assembled. This form of sales gives rise to stable links with the foreign partner who invests in the instrumentation and develops his own production of some parts and subassemblies. In Thailand, for instance, the local law provides that 30 percent of the value of output of the assembly plant must be from products of domestic origin.

The export of spare parts is to increase by one third. If the FSO "makes" the plan for this year, this will augment Poland's export revenues by almost 2 percent.

At the Zeran plant nobody hides the fact that the high growth rate of sales for foreign currencies will be accompanied by a rather modest increase in supplies for the domestic market. This may appear brutal, but the priority of exports is necessary today.

9108
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GROWTH, IMPROVED TECHNOLOGY PLANNED FOR MACHINE TOOLS

Bucharest REVISTA ECONOMICA in Romanian No 6, 8 Feb 80, pp 3-4, 8

[Article by engineer Dr Barbu Gh. Petrescu, deputy director general of the Central Institute of Economic Research: "The Development of Production of the High Technology Branches"]

[Text] In the documents of the 12th Congress of the Romanian Communist Party, there is stress upon the need to continually improve machinery, installations and equipment, and production technologies as one of the essential objectives for the continuing growth of these items' competitiveness and economic efficiency. This orientation is determined by the fact that in the contemporary economy scientific and technical advances constitute the most active elements in increasing social labor productivity.

The technical level of machinery and equipment, and the technological processes in essence determine the efficiency of investments, exploitation costs, the quality of the products and their competitiveness. For that reason, it is clear that the technical solutions for the development of industry decisively determine economic efficiency and their selection involves great responsibilities. The options in this area demand not only the thorough knowledge of everything that is currently new in the world, but also of future trends. "Machine building," comrade Nicolae Ceausescu emphasized, "will continue to be the branch with the most dynamic development, growing at a rate of nearly 12 percent per year. The electronic and electrotechnical industries will experience a 13 percent annual growth, while the production of machine tools will grow 2.2 times during the five year plan."

Viewed from this point of view, the machine tool building industry plays an especially important role since the level of technical equipment in use in the majority of the branches

and sub-branches of the national economy depend upon its achievements. In the following article, we propose to analyze the current stage of development of this industry, where the efforts must be directed to keep pace with progress throughout the world and to satisfy the needs both of the national economy and exports under conditions of increased efficiency.

The analyses carried out attest to the fact that the machine tool building industry in our country is experiencing one of the most spectacular developments. As is shown in Table No 1, the production of machine tools in the current five year plan is 3.48 times greater than that achieved during the 1971-1975 period. According to the volume of production

Table No 1

The Development of Machine Tool Production in the 1971-1975 Period

(1) U/M				Total 1971—1975	Total 1976—1980	(2) Creşterea 1976—1980 / 1971—1975
(4) Volumul producţiei de maşini-unelte din care: (5)	mil lei (3)	940	3 268	11 830	19 128	35 748 (9) 3,48 ori
(6) Maşini-unelte aşchietoare	mil lei	816	3 018	10 108	8 718	30 436 3,49 ori
(7) Maşini de presat şi forjate	mil lei	82	234	978	708	3 770 4,30 ori
(8) Accesorii	mil lei	32	228	863	708	3 353 4,76 ori

Key:

1. Unit of Measure
2. Growth Rate
3. Millions of Lei
4. Volume of Production of Machine Tools
5. Of which:
6. Cutting Machine Tools
7. Pressing and Forging Equipment
8. Accessories
9. Times

of machine tools, our country is in 11th place in the world and, by achieving the objectives of the next five year plan, will be in sixth to eighth place. From this point of view,

In 1985 Romania will be ahead of certain countries having a tradition in this field, including France, East Germany, Czechoslovakia and Poland. The number of existing types in production in 1980 is over 400, or approximately two times greater than in 1975. Just in the current five year plan alone approximately 290 new types of products are being incorporated into production, including: surfacing lathes with digital control, heavy parallel lathes with a 1,250 mm maximum processing diameter and digital control, copying lathes, heavy horizontal face plate lathes with an 8.10 to 16 m diameter and digital control, heavy (180-200 mm) horizontal boring and milling machines with offset and digital control, planer-type milling machines with a 2,200-3,100 mm table width, processing centers, processing machines with multiple cutting faces, and so forth.

The diversification and growth of the complexity of machine tool production determine the improvement of the use of the metals involved. If in 1965 the specific value of machine tools was 26.1 lei per kilogram [lei/kg], in 1978 it reached 67.2 lei/kg and in 1985 it will be 112.3 lei/kg.

In the 1981-1985 five year plan, the machine tool building industry will experience a new development. The production of machine tools and accessories will in 1985 be approximately two and one-half times greater than the planned production at the 1980 level (see Table No 2). Another interesting element that needs to be shown is that at the end of the next five year plan the level of domestic supply to meet the necessary amount of machine tools will rise to approximately 86 percent compared to 58 percent in 1980.

Table No 2

The Growth of Machine Tool Production in the 1980-1985 Period

Production (in millions of lei)	1980	1985	1985/1980
Total	10,488	25,750	2.45 times
Machine Tools	9,838	24,050	2.45 times
Accessories	650	1,700	2.61 times
Level of Domestic Supply (percent)	58	85.9	1.48 times

With regards to the diversification and growth of the complexity of machine tools, to the expansion of the variety of products and to the better use of the metals involved, as expressed in specific prices, in 1985 the value will be increased by approximately 100 percent on the average price of each piece of machinery and nearly 60 percent on the specific price per kilogram compared to 1980.

The production incorporation program for the next five year plan calls for putting into production a greater number of new machine tools and units having a high degree of complexity and automation and new technology. Among these we can mention: jig boring machines, toothed-gear grinders, jig grinders, multiple spindle automated lathes, special grinding machines, mechanical robots with digital controls, and flexible machine, equipment and installation systems for processing using non-conventional procedures.

Equipping the national economy with these new types of machine tools will lead to the introduction and extension of the most modern technologies in the machine building industry. Among these technological procedures we can mention: machine tool processing using outlining digital controls, processing using automated machines with a number of operating settings, processing using flexible machine systems with process computers and robots, electroerosion processing, ultrasonic wave processing, processing using high speed moulding, and so forth. In implementing the decisions of the 12th Party Congress to better use raw materials, the program for the introduction into production and the production itself of machine tools for moulding plastic calls for the production of 220 types of machine tools in 1985.

A brief analysis of these procedures shows that they represent principally a path towards an important increase in labor productivity, as well as towards a substantial reduction in the consumption of materials and energy. With all of this, measures are necessary that will more rapidly contribute to the improvement of the structure of production through the diversification of heavy machine tools and through the increase in the percentage of high price complex machines so that in 1985 the figure will reach an average of $7-8,000 per ton, compared to $3-4,000 per ton in 1979. There must be an increase in the percentage of grinding, lapping, honing, superfinishing and pointing-up machines in the total production of cutting machine tools that are

models of high productivity with high prices and low specific weights. Similarly, there is a demand for the rapid introduction into production of processing machines using non-conventional procedures (processing using electro-erosion, electron beams, ultrasonic waves, lasers and so forth) which have much higher specific prices than existing machines (1,000-2,000 lei/kg compared to 60-120 lei/kg).

From the analysis of the coefficients of use of metals in the production of certain pieces or types of machine tools (see Tables No 3 and No 4), it shows that there are still some cases when these coefficients have values lower than the level of the planned averages, as a direct result of using certain outdated technologies. These technologies lead to the production of certain poured and forged pieces that have additional amounts of processing that are greater than are necessary and outlined in the standards, and to the loss of certain important quantities of metal because of the cutting of certain portions from the pieces, something that can be avoided through the use of certain technological procedures such as plastic moulding or forming and so forth. As is shown in the data in Table No 5, it will continue to be necessary to pay greater attention to the level of use of metals.

Table No 3

Indices of Metal Use in Machine Tool Pieces and Assemblies 1978-1979

In these Lathes:	SNB-400	SNA-500	DRT 32-40
- Spindles	.39	.43	.39
- Distance Sleeves and Rings	.35	.30	.30
- Geared Hubs	.43	.41	.40
- Lathe Beds	.69	.72	.65

In another area, machine tools are still being produced that have weights greater than those of certain similar products produced in other countries (see Table No 6). Similarly, production is still continued on some types of machine tools having low levels of technology, low selling prices and, therefore, a poor use of the metals involved.

Table No 4

Indices of Metal Use in Some Types of Machine Tools

Product	Material	Use Coefficient in 1979	
		Planned	Achieved
Normal Lathes with diameters up to 600 mm	Laminated Steel	.8475	.8597
Normal Lathes with diameters over 600mm	Laminated Steel	.7150	.7246
Horizontal face plate lathes	Laminated Steel	.7216	.7423
Steel plate knurling and corrugating machines	Laminated Steel	.6064	.7500
Wood Processing Machine	Laminated Steel	.7477	.7601

Table No 5

The Evolution of the Degree of Use of Metal

			1965	1970	1975	1980	1985
Preț mediu mii lei mașină (1)	Total mașini-unelte	(2)	43,4	56,2	130,0	252,2	483,8
	mașini de așchiere	(3)	44,1	57,4	130,0	253,3	491,1
	mașini de presare și forjare	(4)	36,3	55,3	121,2	242,5	484,1
Preț specific lei/kg (5)	Total mașini-unelte		20,7	31,3	41,2	70,2	112,3
	mașini de așchiere		20,3	31,2	43,6	74,1	118,8
	mașini de presare și forjare		15,2	19,1	25,7	43,7	74,3
Preț specific $/kg (6)	Total mașini-unelte		1,47	1,74	2,3	3,9	

Source: "Production of Machine Tools, 1981-1985," an ICSIT-Titan study, 1979.

Key:

1. Average Price, in thousands of lei/machine
2. Total Machine Tools
3. Cutting Machines
4. Pressing and Forging Machines
5. Specific Price, in lei/kg
6. Specific Price, in dollars/kg

Table No 6

The Net Weight of Certain Types of Machine Tools in Comparison with Similar Products Built in Other Countries (1977-1979)

Caracteristicile principale (1)	U.M (2)	Produs România (3)	R.S.C. SN 500x1 500 (4)	U.R.S.S. 1 A 625 (5)	R.D.G. (6) ODZ 500 IVL	R.F.G. (7) WEILER CAZLNEUVE WP 500	Franța (8) IHS 503
(9) Strung normal SNA 500x1 500							
Diametrul de trecere peste batiu (10)	mm	500	500	500	500	533	500
Puterea motorului principal kW (11)	kW	7,5(10)	5,5	10	5,5(7,5)	5,5(14,7)	8,8(11,8)
Greutatea totală a mașinii (12)	kg	3020	1715	2625	2650	2910	1950

Caracteristicile principale	U.M	Produs România	R.D.G. DAR 40	R.S.C. A 40 B	U.R.S.S. 1 b 140	R.F.G. INDEX B 42	Anglia HERBERT HSA 1381 (13)
(14) Strung revolver SARO 42							
Diametrul maxim al barei de prelucrat (15)	mm	42	40	42(50)	40	42	41
Puterea motorului principal	kW	5,5	7,5	5,5	7,5	5,5	5,5
Greutatea netă a mașinii (16)	kg	2300	2300	2100	2300	2200	2120

Caracteristicile principale (17)	U/M	Produs România	R.P.P. KUB 160	U.R.S.S. 1 510	R.S.C. SK 16	R.F.G. FRORIEP VE 16
(18) Strung carusel SC 17 (SC 1 600)						
Diametrul maxim de prelucrat (19)	mm	1 700	1 600	1 600	1 700	1 600
Puterea motorului principal	kW	45	55	30	37	30,2
Greutatea netă a mașinii	kg	21 430	20 000	19 200	18 [illegible]30	18 [illegible]00

Key:

1. Principal Characteristics
2. Unit of Measure
3. Romanian Product
4. Czechoslovak Product
5. Soviet Product
6. East German Product
7. West German Product
8. French Product
9. SNA 500x1,500 Normal Lathe
10. Diameter of a Pass over the Bed
11. Power of Main Motor
12. Total Weight of Machine
13. British Product
14. SARO 42 Turret Lathe
15. Maximum Rod Diameter
16. Machine Net Weight
17. Polish Product
18. SC-17 (SC 1600) Horizontal Face Plate Lathe
19. Maximum Processing Diameter

Among these machines we can mention shaping machines (SH-425 and SH-700) and vertical drilling machines (GCO-25 and GCO-40) which are still even sold for export purposes and which have low prices (1.47 to 3.04 dollars per kilogram).

That is why it is necessary in the future to keep in mind the need to redesign certain machines, as well as to introduce and more rapidly apply modern technologies in order to reduce metal consumption. Some of these technologies are: precision forging, stepped forging and laminating of spindles, welding of complex shaped pieces, making certain pieces in the form of distance sleeves and rings from sintered bronze, cold extrusion of certain thin-wall parts, replacing certain metallic parts with plastic pieces, incorporating into production certain types of complex and automated machine tools having higher specific values, and so forth.

In order to use raw materials and materials at a higher level and to achieve certain higher technical-functional indices for machine tools, it is absolutely necessary to keep in mind some areas of action:

- the accelerated development of the production of hydraulic subassemblies, areas where there are still arrearages;

- the more rapid transition to the production of specialized and automated machine tools;

- the application of the most modern building solutions, such as: hydrostatic guideways, activation via direct current motors, use of moveable tables, simultaneous use of a number of working faces;

- the building at a more rapid pace of processing centers and flexible machine systems, and the automation of machine tool services;

- the production of machine tools for processing by way of non-conventional procedures that have higher levels of use of metals;

- the classification of all component elements and subassemblies of machine tools with effects upon the judicious use of metals and the growth of labor productivity.

NUMEROM Equipment of Very High Precision and Complexity

It is a known fact that machine tools faithfully execute any operation of great complexity and precision. However, they cannot work alone; they need to be guided permanently by a well organized, careful and prompt "head" in making decisions. A solution in this regard was provided by the Institute for Design-Automation in Bucharest, which finished two series of NUMEROM equipment (300 and 400) with data displays and digital outlining control for cutting machine tools and non-conventional processes. This equipment is characterized by peak performance within the framework of certain modern technologies based on the use of microprocessor-type MSI, ISI and VISI integrated circuits and TTL integrated logic circuits, as well as integrated linear circuits.

The third generation NUMEROM equipment, series 300 and 400, were conceived and built as coherent, unified units, with their functional complexity differing from the simple data displays (NUMEROM-303) up to displays on two and two and one-half axes (NUMEROM-460) for complex machine tools, lathes and processing centers.

The variety of functions that they provide, the precision corresponding to a resolution of .001mm, and the high capability stemming from modern technology give the units in this generation the prestige of being top-of-the-line within the framework of the automation industry. Because of the use of integrated circuits, the dimensions of this equipment are much smaller and the costs are lower than second generation equipment based upon the lesser evolved technology of using discreet electronic components. Having integrated measuring systems, the third generation NUMEROM equipment gives the measuring process an objective quality, eliminating operator error and speeding operations by eliminating intermediary controls.

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INFORMATION SYSTEM FOR TECHNICAL-MATERIAL SUPPLY STUDIED

Bucharest REVISTA ECONOMICA in Romanian No 6, 8 Feb 80 pp 16-17

[Article by Cornel Suciu of the Ministry of the Chemical Industry and Liliana Marinescu of the Computer Center of the Ministry of the Chemical Industry: "Views Regarding An Information System in the Field of Technical-Material Supply"]

[Text] Considering the discussions initiated by REVISTA ECONOMICA as an especially welcome event regarding the new quality in the field of information organization, we wish to show some of the specific aspects in the field of technical-material supply, with implications for the carrying out of activities in the economic units.

Currently, a large amount of labor is still being consumed in office activities in the planning and follow-up of supply, sales and transportation activities. Also contributing to this matter in a significant way is the fact that we still do not have a unified information system for the national economy that is correlated in detail with the organizational structure, with the normative acts in effect and with the transactions that occur in the process of providing technical-material resources, from the enterprise level up to the highest level of reporting - the State Planning Committee.

Until now, the enterprises, centrals and ministries introduced automated data processing for some of their activities, generally for the purpose of reducing the volume of office work or under the influence of certain outside factors. For example, when the Ministry of Transportation and Telecommunications began to use computers to check the monthly transport programs, an action that required the writing of certain code series in formats, the enterprises having a large number of customers found themselves in the situation of no longer being able to complete the drafts for these programs with the number of people outlined in the plan. As a result, they were obligated to draw up instructions to carry it out with the use of a computer.

In establishing the principal directions for accelerating the transition to a new quality, the documents of the 12th Congress of the Romanian Communist Party also called for the goal of achieving an all-encompassing and unified information system for the economy that would respond to the demands of both the enterprises, centrals, ministries and central reporting organs, and the territorial organs, now and in the future.

The unified information system presupposes both adhering to the unique methodology of automated data processing and resolving the requirements of each recipient, regardless of the level of this recipient. The solution to the problem through the use of automated data processing involves, in our opinion:

- the use of certain unified data encoding systems;

- the creation and maintenance of certain data bases built on a common structure;

- the use of certain compatible programs at all levels of processing;

- the provision for transmitting data via the teletransmission system; and,

- the standardization of the coding carrying the information.

Activities That Should Be Resolved By A Unified Information System

Keeping in mind the improvements made to the legislative framework regarding planned economic-social development and the current methodology for drawing up and approving annual and five year plans, including the planning for technical-material supply, as well as theexperience accumulated, we feel that the activities in the field of technical-material supply which logically should be reflected in a unified information system are as follows:

In the Planning Period for Supply, Sales and Transportation:

- determing standard stock levels and the standards for circulating goods on the basis of instructions in effect; successively centralizing them at the level of the central

(by type, product and units), the ministry (by type, product and centrals), the Ministry of Technical-Material Supply and the Review of the Management of Fixed Assets, and the State Planning Committee (by products and ministries);

- substantiating the necessary amount of supplies for the enterprises on the basis of the production plan, consumption rates, and standard and preliminary stock levels; determining the volume of products that are to be sold and, starting with this point, establishing "the required amount to be transported" for the plan year, on the basis of which the transportation service contract would be concluded;

- checking at the level of the central, or at the ministry for those units having the status of a central, on the justifications presented by the units with regards to the production plan, consumption rates and standard stock levels;

- centralizing the information on the necessary amount of supplies, as justified by the units, at the level of the central (or at the ministry level) by type, products and units, giving the total for the central and attaching the justifications upon which the necessary amount was based. In other words, there should be at the central a document which shows the following information for each type of supply item: who uses it; what is it used for; the consumption rate; the priority the central assigns to it in the event the raw material cannot be completely obtained;

- centralizing the information completed by the central on the necessary amount of supplies at the level of the ministry (see the previous point), checking adherence to consumption rates, standard stock levels and production plan figures, finally producing a document that shows the above mentioned information for each type and product;

- transmitting the information on the necessary amount of supplies (approved by the leadership of the ministry) to the Ministry of Technical-Material Supply and the Review of the Management of Fixed Assets, the State Planning Committee and the balance coordinators;

- drawing up the draft synthetic balances at the level of the balance coordinators;

- analyzing the synthetic balances at the level of the central (the Ministry of Technical-Material Supply and the

Review of the Management of Fixed Assets and the State Planning Committee), correlating resources with destinations (in diverse variations, including the problems tied to importing, exporting, finances, transportation and so forth, in other words, determining maximum efficiency), then approving these balances. In the event the called for quantity for a product cannot be fully allocated, it should be indicated which specific part of the production, for which justification was obtained, should be cancelled as being less efficient;

- transmitting the approved quotas and production plans to the interested ministries, distributing them to the centrals;

- completing, by the centrals and the units similar to them, the specifications within the limits of the approved quotas and forwarding them to the balance coordinators. Similarly, the balance coordinators would receive the approved synthetic balance, as well as the production levels by type, included in the plan figures, from all the suppliers in the economy regardless of their subordination;

- checking the specifications at the level of the balance coordinators, as well as the levels of production, then the drawing up of the analytical balance (including establishing the production and optimization programs for transportation), and issuing the allocations and extracts from the analytical balance;

- issuing orders from users and draft contracts from suppliers, and concluding product delivery contracts;

- concluding transportation service contracts;

- completing 10 day and monthly reports regarding progress in contracting;

- carrying out updates that become necessary after the state plan is finished and approved, with all of its changes.

During the Period of Carrying Out the Technical-Material Supply:

- following up on deliveries in accordance with the concluded contracts or expressly given directives, as well as achieving exports and imports;

- reviewing adherence to consumption rates;

- effectively resolving violations that occur along the way, including the use of plan reserves, redistribution of stock surpluses or distribution of intervention stocks, as the case may be; drawing up quarterly, monthly or shorter period semianalytical balances, as the situation requires;

- completing and centralizing statistical reports called for by regulations in effect and reports on stock surpluses;

- drawing up other reports needed by reporting organizations for analysis (achieving exports, achieving imports, available items as a result of certain deviations from planned production, status of deliveries of a product to a certain unit or central, and so forth);

- drawing up and following up on the execution of the monthly transportation programs;

- bringing up to date the optimum use of transportation, caused by deviations that occur in the supply process.

Some Methodological Problems

Before beginning to design such a system, a series of problems of a methodological nature should be clarified that also involve the improvement of certain regulations. Thus, since currently there are a number of encoding systems (CUPS, TLM, the one from the balances), it appears necessary to have a single encoding of items and products that can be used in all sectors of activity.

There is a need to resolve the lack of correlation between the provisions referring to the optimization of transportation and those regarding supply.

In cases where product quotas are allocated by plan holders and the specifications, contracting and delivery are carried out through county or specialized supply bases, the balance coordinators encounter great difficulties in drawing up the analytical balances, especially for optimizing transportation, because of the lack of clarity in the existing regulations. Thus, there is need for a clear methodology and a precise definition of responsibilities for providing these products.

We should not lose sight of the fact that the system is inconceivable without the establishment of certain obligatory formats, such as structure, at all levels.

The problem of a complex information system for technical-material supply, one correlated with other systems, that is very large raises the question: With whom do we solve the problem? The opinions are divided. In practice, until now, this task was given, nearly exclusively, to the computer centers and offices. And, these offices, not having or not being able to get the complete picture of the economic mechanism at the national level, cannot resolve the question of a unified and all-encompassing system.

Our experience and collaboration led us to the conclusion that the problems must be resolved in this manner: The general concept of the project, the establishment of an economic mechanism that can be reflected in automated data processing applications, cannot be placed solely on the computer centers, but must drawn up in the smallest detail by the State Planning Committee, together with the Ministry of Technical-Material Supply and the Review of the Management of Fixed Assets, with the Central Institute for Management and Information, and with the ministries, by those specialized persons who work directly in the sectors of practical activity and who are responsible for solving economic problems. In this sense, we propose the establishment of a group, made up of representatives from the mentioned organizations, that will work on the system concept. In this phase, the computer centers would have the role of consultants. After it is drawn up, they would establish the structure of the information system, the data processing algorithms, and the inputs and outputs of the automated data processing. After this, they will be able to write the programs under just one guidance for the economy, in order to avoid duplicate work on the same problem.

The very thorough analysis of the information system that must be done requires a broad consultation with people who have experience in the solution of problems at the level of enterprises, centrals, ministries and balance coordinators, before involving the computer centers in this action. Otherwise, it will work in an uncoordinated fashion with reduced levels of efficiency, even with a series of useless costs. As is well known, there are already a series of automated data processing programs for some activities, but these cannot be fully applied because there is a lack of total compatibility of the systems at the national level and a lack of connections that would permit the automated transmission of data from one computer center to another.

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ELECTRIC POWER MINISTER DISCUSSES RESOURCES, CONSERVATION

Bucharest SCINTEIA in Romanian 9 Jan pp 1,5

/Interview with Gheorghe Cioara, minister of electric power, by Ion Teodor/

/Text/ /Question/ Because of its importance electric power production is prominent on the list of products for which levels are specified under the uniform national plan for socioeconomic development for 1980. Proceeding from the plan assignment, what is the factor that translates the higher efficiency level in the production of electric power?

/Answer/ It is well known that the expansion of the power industry underlies the development of the other industries, agriculture, transportation, the other economic branches and social activities. Hence, as underlined in the documents of the 12th Congress of the Romanian Communist Party, the expansion of the power base is one of the major guidelines of the next five-year plan. Naturally, it is not only a matter of quantitative increase; the production of electric power must be one of the efficient economic activities.

In the present world context, but also on a long-term basis, when ensuring energy poses problems that may significantly impact the economic development of countries, more and more emphasis is placed on meeting the energy needs from local resources, making best use of all resources and increasing the efficiency in this area. Under our party and state policy on energy, low-grade coal (lignite from the Oltenia coal mining area) was included in the primary energy balance, as early as 10 years ago, and efforts were made to gradually lessen the role of hydrocarbons in the production of electric power. The large thermoelectric power stations at Rovinari and Turceni, which are the main users of the lignite from that area, were designed and built in this context.

For the purpose of capitalizing on the domestic energy base, the first thermoelectric power station based on shale is now in the construction stage. It will have an installed power of 990 MW and will commence production at the end of 1981. Moreover, we must emphasize that the ampler development of the country's hydropower potential results in greater efficiency of the electric power production. Consequently, a special program for hydropower projects was worked out and is in the development phase. It will result in the volume of electric energy produced in hydroelectric power stations at the end of 1980 being about 17.6 percent.

Another avenue of raising the efficiency of electric power production involves maximizing power yields, with special emphasis on expansion of thermal energy production, a system under which heat and electric power are produced in combination and which was introduced in Romania as early as in 1960. Consequently, 1980 will see the putting into operation of additional thermal energy production units.

I must add that work was commenced on the first nuclear power plant, whose first unit will be put into operation in 1985.

/Question/ It is anticipated that at the end of 1980, in the units of the ministry, electric power production based on coal will account for 43.5 percent and the one based on hydroelectric power resources, 19 percent. What has been done to expand the use of solid fuel and utilize the hydropower potential of this country?

/Answer/ Actually, the 1980 state plan provides for a significant increase in the volume of electric power produced in stations based on coal and hydroelectric power resources. For instance, from the total planned production of 68.3 billion kWh, the electric power stations under the Ministry of Electric Power will generate 29.7 billion kWh based on coal, 1.5 billion kWh based on secondary power resources, and 13 billion kWh in hydroelectric power stations. The production of electric power based on hydrocarbons will be 24.1 billion kWh, respectively 7.6 billion kWh less than in the previous year. This will be done, in the first place, by increasing the level of utilization of the installed power in the existing power stations based on coal and especially by increasing the availability of 330 MW sets in the Rovinari and Turceni thermoelectric power stations. Furthermore, it is anticipated that additional units based on coal will be made operational, such as two sets of 330 MW each at the Turceni thermoelectric power station, a group of 210 MW at the Deva-Mintia thermoelectric power station, and the first set of 50 MW at the Borzesti II thermoelectric power station.

The production of hydroelectric power will go up in 1980, versus the other years of this five-year plan, as a result of the

completion of new facilities in the power plants on Olt River: 38 MW at Arcesti, 45 MW at Dragasani, and 26 MW at Slatina and as a result of the completion, in a short span of time, of a unit of 150 MW at Gilceag, on Sebes River.

/Question/ Under this five-year plan, six coal-based power generating sets of 330 MW were put into operation at Rovinari and Turceni. What does the Ministry of Electric Power plan to do to shorten the period for touching upon the projected parameters at the high-capacity generating sets based on coal?

/Answer/ Because of the high parameters of steam and automation level of the process, the 330 MW coal-based power sets installed at Rovinari and Turceni are technically among the most refined in Europe. During the operation of these sets some refinements and adjustments were made in light of the actual conditions of operation, because the coal used had deviations from the provisions of the design. The measures which proved to be effective were disseminated or are in the process of being disseminated. Consequently, all the required changes and improvements have been made for the new sets which will be put in operation this year at Turceni. Moreover, steps were also taken to upgrade the quality of the component units turned out in the enterprises under the Ministry of the Machine Building Industry.

Special attention has been further paid to the units for dressing coal to supply boilers with lignite of the quality which is as close as possible to that specified in designs and which is free from foreign bodies. In this area, we also rely on adequate support from miners, who, under the given conditions, of deposits which are now being mined, will make efforts to provide adequate amounts of coal, in a smooth flow and at parameters which are as close as possible to those planned. We are trying to increase the capacity of coal deposits and, in this context, the prospects for mixture of various types of coal, so that we may supply the boilers with coal characterized by a quality that is as uniform as possible and as close as possible to the provisions of the design.

Concurrently, vigorous action is taken to upgrade the training of the operating staff and repairs personnel, taking into consideration the fact that most workers in this sector do not come from plants with coal-based high-capacity power sets.

In light of the efforts made and the measures taken or in the process of implementation, we feel that the planned parameters of the coal-based high-capacity power sets will be touched upon within spans of time even shorter than specified in the norms.

/Question/ The ministry's units are not only producers but also users of power. What is being done to further reduce relative consumption rates for energy in the electric power generating units?

/Answer/ Reducing relative consumption rates in terms of fuel and electric power continues to be a constant concern of working people in the power plants of the Ministry of Electric Power. Provisions for 1980 involve expanding the support given the producing units by experts in research, design, industrial central and ministry for the implementation of the programs outlined and for the discovery of new avenues and approaches to cutting relative consumption rates. The research plans provide for topics on improving the thermal charts and the combustion processes in the steam boilers of steam power plants. Expanding the provision of coal-based boilers with postcombustion grates is a case in point. Part of the same context is the measure to recover the heat from the condensers of the turbines in thermal energy production by switching the turbines to operation with aggravated vacuum or by incorporation of special clusters of pipes in their condensers. So far, this procedure was used in 17 turbines and because of the efficiency involved it is expected that in 1980 it will be used in 14 more turbines. Steps will also be taken to upgrade the utilization of the turbine thermal intakes and to adjust some condensation turbines for the purpose of supplying heat to a number of users. Constant efforts will be made to replace and modernize the equipment in electric power stations, to increase the efficiency of the basic and auxiliary facilities, to upgrade the measurement charts, and to automate and monitor the processes in steam power plants. Furthermore, relative consumption rates will also be reduced as a result of implementing the measures outlined for raising the reliability and continuity in operation of the 330 MW coal-based sets at the Rovinari and Turceni plants.

/Question/ Regarding this issue, what is being done to reduce the consumption rates for hydrocarbons in coal-based steam power plants?

/Answer/ The addition of hydrocarbons -- fuel oil and natural gas -- to the boilers with the operation based on coal is needed at the start and for avoiding the extinction of the flame when the coal is missing or when the quality of the coal deteriorates suddenly. As mentioned above, both the experts in research and design and the mining staff are constantly concerned with reducing the consumption level in terms of addition hydrocarbons at power stations based on coal. These concerns translate into technical and organizational steps which include: increasing the coal storage capacity in thermoelectric power stations and creating prospects for homogeneization; modernizing and raising the capacity

of facilities for retention of metal bodies which occur in coal in order to avoid deterioration in coal crushers and belts; fitting injectors with a low yield of fuel oil for addition; installing closed circuit television lines for supervision of the flame in the firebox of the boiler, and so on. We expect that the measures taken this year will result in a significant reduction of the addition of hydrocarbons used to stabilize lignite combustion. This will serve to solidify the good results obtained at the end of last year, when during some periods the 330 MW coal-based sets operated with a low consumption of fuel oil or temporarily even without hydrocarbons.

/Question/ The material base of the electric power producing units will further amply expand. What will be done to improve the utilization rate in terms of equipment, to upgrade the training of personnel, and to heighten safety in operation of the national power system?

/Answer/ The increasingly higher technical standard of the power producing facilities which will pe put in operation, the modernization of existing facilities, and the high degree of automation necessitate better training and skills of the personnel at all levels and their close familiarization with the equipment which they operate. Therefore, we shall take action to hire the ablest graduates of specialized institutes and schools for the stability of personnel in power plants, specifically in the units which operate on the basis of coal, by improving the social amenities. For the purpose of cutting relative consumption rates for fuel and energy, the operating staff will place special emphasis on the cost-effective run of the facilities. The entire activity of operation will focus on greater safety, maintenance of facilities in the context of nominal operating parameters, for the purpose of adequate supply of users of electric and thermal energy and of continuous reduction of breakdowns in the national power system. The industrial centrals and the national power control center will focus on matters pertaining to the technical standard of operation of the facilities and the overall power system and on strengthening order and discipline of all workers in the operating, maintenance, and repairs units.

/Question/ How does the ministry's leading body plan to bring about the modernization of processes and equipment in industrial units, the implementation of the power consumption norms, and the priority expansion of products which involve low power consumption rates?

/Answer/ The modernization of processes and equipment in industrial units, compliance with electric power consumption rates, and priority expansion of products which involve low electric power consumption rates are tasks that are allotted to user units, industrial centrals and coordinating ministries. Moreover, the

Ministry of Electric Power is constantly concerned with the wise utilization of energy and the reduction of electric energy consumption rates for all categories of users. The energy consumption rates of industrial units largely depend on the manner in which they had been devised as early as the designing phase. Therefore, when issuing the electric energy assessments and the uniform agreements in the designing stage for new industrial, economic and sociocultural facilities which are users of electric energy, the Ministry of Electric Power, in close cooperation with the Permanent Commission for Assessment and Supervision of Fuel and Energy Consumption, analyzes the approaches submitted by the designers in terms of energy use, with the emphasis on selecting the modern techniques and equipment which ensure low energy consumption rates, on a par with accomplishments on a world scale. On a regular basis, complex analyses are organized in major industrial centers, jointly with the Ministry of Supplies and the coordinating ministries. Attending are experts from the units involved, specialized research and design institutes and enterprises of electric power plants and networks. The required measures are taken to cut electric and thermal energy consumption rates, to do away with loss of energy fluids, to lessen consumption rates for raw materials and supplies that involve large amounts of energy, and so forth. The price policy on electric energy focuses on using economic factors to promote programs for conservation of electric energy, reduction of demand for power at peak load hours of the national power system, and creation of buffer consumption levels. Furthermore, steps were taken to monitor and promptly report on the electric energy consumption levels of the chief categories of users where wastes are found or who do not operate within the limits of the allocations.

We have a Program-Directive for research and development in the area of energy for the 1981-1990 period and the main guidelines by the year 2000. Worked out under the direct guidance of party secretary general Nicolae Ceausescu, the program-directive in the area of energy proceeds from the need to ensure the sources of energy for the rapid socioeconomic progress of Romania, to exemplarily implement the party Program and the Directives of the 12th Congress of the Romanian Communist Party. Statistical figures indicate that we are producing greater and greater amounts of electric power, but let us constantly remember that we also must conserve it increasingly wiser.

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MINING INDUSTRY TO CORRECT DEFICIENCIES, IMPROVE OPERATION

Bucharest SCINTEIA in Romanian 13 Jan 80 pp 1,5

/Interview with Virgil Trofin, deputy prime minister of the Council of Ministers, minister of Mines, Petroleum and Geology, by Ion Teodor/

/Text/ /Question/ By the nature of the activity which it coordinates the Ministry of Mines, Petroleum and Geology is the chief provider of energy resources and mineral raw materials, which are essential to all the economic branches. What are the main results obtained in 4 years of the five-year plan and what are the tasks allotted for 1980?

/Answer/ Working people in the mining industry and in the geological sector are aware of the importance of the tasks alloted them and are constantly concerned with broadening the local base of raw materials and increasingly meeting the economic needs from domestic resources. Because the party leadership and Nicolae Ceausecu personally paid special attention to our sector, we have received large funds for the expansion of the material base, the provision of high-standard equipment, and the upgrading of the working conditions of miners, oilworkers and the other working people in the ministry's units. For instance, during the 1976-1979 period, 54.7 billion lei were invested for the expansion of production facilities. This period saw the completion of 127 new production units in the sectors of coal, crude oil, and metal and nonmetal minerals. Moreover, based on the mechanization plan approved for the mining and petroleum industry, there has been a more rapid rate in provision of high-standard equipment, specifically in strip and underground coal mining. The coal mining units now have 127 complex cutting facilities, 24 rotor excavators, 188 drift combination machines, and this means great progress over the year 1975.

/Question/ How was this investment effort reflected in the production plan?

/Answer/ As a result of the expanded material base the output of the mining industry went up. Last year saw a net total coal output which was 27 percent higher than that for 1976. In the metal and nonmetal mineral sector, in the context of decrease in the amounts of useful substances in the coal fields, it was necessary to mine and process larger and larger amounts of minerals in order to keep the metal output at a constant level. Nevertheless, last year and in the 4 years of the five-year plan, the plan was not implemented for coal and crude oil. For crude oil, the output even went down from year to year because of the decline in the reserves discovered by geological surveys and because of the decrease in the productive potential of the older deposits. In light of the need for wholly implementing the plan assignments for this year, the last of the five-year plan, all the units of production, geological surveys, and research and design must thoroughly organize their activity and make best use of their resources in terms of equipment and manpower.

/Question/ Normally, research must be one step ahead of production. What is being done to improve geological activity and to ensure closer cooperation between workers in geology and workers in production units?

/Answer/ The geological surveys conducted in the 4 years of the five-year plan have helped to increase the reserves of useful mineral substances. Nevertheless, as stressed by Nicolae Ceausescu at the work sessions with the active of the Ministry of Mines, Petroleum and Geology, geological activity does not meet current requirements. For the elimination of the deficiencies provisions have been made to disseminate high-standard research techniques and procedures, to upgrade the utilization of equipment and manpower. Furthermore, as early as last year, measures were taken to ensure the material base for exceeding the coal output level planned for 1985 in 1983. In the oil industry, special emphasis is placed on intensified research on very deep formations, an area in which action was slow so far.

For 1980, geological research focuses on further investigation of the areas which already proved to have accumulations of useful mineral substances and of new areas and resumption of research in old productive areas, based on new concepts and upgraded working methods and techniques. Actually, the plan of geological research for 1980 was reexamined and improved in light of the directives of the party executives.

As for cooperation with the units in the territory, we point out that it has become a regular procedure to conduct substantive geological analyses by complex teams, on a quarterly basis and whenever needed, in the units of the territory. During these

analyses, the participants orientate and adapt the surveys in progress in light of the results obtained along the way and prepare the work charts. Geological workers have planned to assist the minig sector also by researching some projects up to the point of delivery for operation. To this end, specifically for coal, provisions have been made to establish experimental coal faces, pilot mines, mini-open pits, and so forth.

/Question/ For coal there is a significant backlog in terms of implementing the plan. What lessons were drawn from the deficiencies found and what does the ministry do to complete the plan assignments for 1980?

/Answer/ The production plan for 1979 was not implemented and significant backlogs exist. This was mainly caused by the fact that by the end of 1978 a number of facilities whose production had been taken into consideration when the plan had been worked out were not completed. Important lags existed at the units of the Oltenia coal field, where, though production went up, the results were below the planned level. In this coal field we did not succeed in firmly implementing the important measures outlined by the party leadership for the utilization of the equipment at full capacity.

The 1980 plan for coal production provides for an increase of 21.3 million tons over the level for 1979. For the completion of the assignments specified, new mines and open pits went into operation and existing production facilities were expanded, specifically in the mining areas of Jiu Valley and Oltenia, concurrently with provision of underground and open pits with modern equipment, based on the mechanization program approved by the party leadership. Significant expansions in facilities will be achieved by complex mechanization of coal faces, with equipment of domestic and foreign make. Important factors in organization of production will include central control and automation of processes, specifically of production lines in open and underground mining. The year 1980 will see the continued mechanization of processes for opening mining fields by ever wider use of combination machines for drifting and sinking and heading machines made in Romania. In Jiu Valley, a new coal dressing unit will be put into operation at Livezeni and the dressing unit at Petrila will be modernized. For equipment maintenance and repairs new units for overhaul and repairs will go into service, specifically for construction and conveyance facilities. Teams of experts from the ministry, centrals and combines were established. They examine the physical stages in completing the investment projects for the new units in the Oltenia mining area and monitor the promptest commissioning of these units. Moreover, measures were taken to expeditiously commence work on opening, preparation, and extraction

of coal from the deposits situated in new zones which now are in the stage of geological surveying.

/Question/ As a result of the visits made by Nicolae Ceausescu to a number of mining units in the Oltenia and Jiu Valley coal areas, a comprehensive program was initiated for mechanization of coal and ore mining, and duties were specified for the mining units and for the machine building enterprises. What is the main progress made in 1979 and what are the projections for 1980?

/Answer/ In addition to the provision of mining units with machines from the current production of the machine building industry, this program also envisions an arrangement for the production of more than 50 types of small-scale mechanization devices to ease human effort in mining processes. The implementation of this program is monitored by a command that includes executives and specialists from the Ministry of the Machine Building Industry and experts delegated by the mining and machine building units. Consequently, the year 1979 saw the production of two prototypes of coal cutting machines, four prototypes of combination machines for coal face support, the prototype of a scraper conveyor, and so on.

Based on the program worked out, 1980 will see the beginning of serial production and the provision of mines with many facilities characterized by technical and cost-effective standards on a par with those of foreign makes. This creates conditions for the switch to a higher qualitative stage in the provision of equipment to the mining units, that is to automation of processes. For instance, automation processes already are in use at some conveyor units, pumping stations, units for dressing useful mineral substances and other facilities. Under the next five-year plan automation will be expanded to include all mines.

We must point out, however, that in spite of all the headway made, there also are lags in implementing the plan specified. Recently, party secretary general Nicolae Ceausescu approved a comprehensive program for the better streamlining and provision with equipment of the units under the Ministry of the Machine Building Industry which turn out machines and installations for the mining and oil industries. We strongly feel that the implementation of this program will result in elimination of the lags and in full implementation of the mechanization program in the mining and oil sectors.

/Question/ However, also some machines which have been provided are not used efficiently. What is being done to increase the utilization index for the technical base?

/Answer/ True, but always have the machines and installations been used and maintained properly. For instance, the rotor excavators for open pit lignite mining were only used 52-53 percent of the available time. Moreover, for the more than 2.5 cu m bucket excavators, the average utilization index is only 69 percent. Unfortunately, examples abound. It is true that some objective causes existed which generated this situation. But the main cause involves deficiencies in maintenance and operation of equipment and production lines.

Superior utilization indices were established for 1980: 75 percent for rotor excavators, 78 percent for underground loading machines, 74 percent for the over 2.5 cu m bucket excavators, 81 percent for drifting combination machines. We also took the proper measures to reach these levels. For instance, teams comprised of the shiftt workers, technicians and engineers were established. They verified each piece of equipment in open pits and specified steps for repairs and replacement of some subassemblies and spare parts. For estimation of the stage in overhaul and repairs we introduced an international daily monitoring system, up to the level of the ministry. Because about 40 percent of the unused time for rotor excavators is due to interruptions for vulcanization of the conveyor rubber belts, measures were taken to organize the specialized vulcanization teams. Furthermore, action was taken to complete repairs either in specialized plants or in special machine building plants under the ministry. Gradually, based on a recently prepared survey, action will be taken to streamline the ministry's own plants in completing the repairs needed. This will result in all the plants harmoniously blending in the activity of repairs, becoming a genuine "chief mechanic" for the mining units.

/Question/ What are the prospects in the oil industry for intensifying the projects for drilling, specifically deep drilling?

/Answer/ Based on the progress made in building domestic-made oil drilling equipment and the refinements in well-boring, drilling techniques have constantly improved. Actually, in 1980, by using the same number of machines we shall drill an extra amount of 60,000 m. Special emphasis will be placed on expanding deep drilling, an area in which research conducted so far shows great prospects in terms of ample deposits of hydrocarbons. Consequently, the drilling volume in this area will go up, versus 1979, about 45 percent in 1980 and by a factor of 3.5 in 1985. Also, we shall switch to drilling a well planned at a depth of 7,000-8,000 m.

/Question/ What is being done to raise the degree of recovery for crude oil in deposits?

/Answer/ This is a basic concern of experts in the oil industry. The year 1979 saw the continuation and expansion of projects for increasing the degree of recovery of crude oil in 180 deposits which were outstanding in terms of reserves and production. This procedure resulted in a production of about 3.1 million tons of crude.

Plans for 1980 involve the initiation and expansion of underground combustion and steam injection processes, which under the 1981-1985 Five-Year Plan must provide an important production input.

/Question/ At the meeting on upgrading the activity in the area of the mining industry, which was held last October, Nicolae Ceausescu pointed out the existence of serious deficiencies in the activity of the leading bodies of the ministry, centrals and enterprises. What was done to improve the organization of work and production, to eliminate the deficiencies and to ensure the full implementation of the plan?

/Answer/ Strongly mobilized by the criticisms levelled and the directives received we have developed and firmly applied in each sector and at all levels -- from the executive council of the ministry up to the production sections -- specific programs for handling the problems which underlie the increase in the volume and efficiency of the activity in the mining industry. Here are only a few of the measures taken. In 1979, in the Oltenia mining area, various forms and classes of training, vocational schools and lyceums, trained 4,500 workers and 413 cadres with college degrees were assigned to units in this region.

The executive council of the ministry and teams of experts of the ministry directly support and rigidly supervise the centrals, combines and enterprises in completing the programs for provision of equipment and mechanization, in formulating and implementing the measures for completion of the facilities planned in major units -- banatite, Moldova Noua; sulfur, Calimani; shale, Anina, and so on -- recruiting, training, and advancement of the personnel required, reduction in auxiliary personnel, ensuring of social amenities in the mining centers and centers of geological activity, and strengthening of order and discipline in work.

Working people in the units of the mining industry and geological activity, under the leadership and guidance of local party bodies, that pay special attention to this sector, are resolved to make every effort and put their experience to work for the exemplary accomplishment of the tasks allotted them under the documents of the 12th Party Congress.

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REVIEW OF OIL REFINING CAPACITIES, FUTURE PLANS

Zagreb NAFTA in Serbo-Croatian No 2, Feb 80 pp 103-106

[Excerpts] Refinery capacities in Yugoslavia, which for some years prior to 1975 had been unchanged, began at that time to expand rapidly. In 1975 the total capacity for primary processing of crude oil amounted to 13.2 million tons/year, while at the beginning of 1979 it had reached 25.5 million tons/year. Since further expansion and construction of new facilities are under way, their completion will bring the total capacity up to 32 million tons/year.

Refinery Capacities in Yugoslavia (in million tons)

1) Rafinerija	1975.	1979.	iza 1979.
2) Bosanski Brod	2,5	2,5	5,0
3) Lendava	0,6	0,6	2,0
4) Novi Sad	0,6	1,4	1,4
5) Pančevo	1,4	5,5	5,5
6) Rijeka	4,5	8,0	8,0
7) Sisak	3,6	7,5	7,5
8) Ukupno	13,2	25,5	29,4
9) Skopje nova rafin.	—	—	2,5

Key: 1. Refinery
2. Bosanski Brod
3. Lendava
4. Novi Sad
5. Pancevo
6. Rijeka
7. Sisak
8. Total
9. New refinery at Skopje

The table presents the situation in primary processing of crude oil in Yugoslavia in terms of capacities.

Prior to 1975, the available capacities were practically completely utilized and it was necessary to increase them in keeping with the country's growing needs for petroleum products. In addition, certain installations for primary processing did not allow for secondary process hookups

that would function efficiently. Furthermore, the country's growing needs for petroleum products according to product mix increasingly called for higher production of lighter oil products, at the expense of heavier ones. Finally, the expected rapid growth in the petrochemical industry indicated the need, along with expansion of primary processing capacities, for the construction of suitable secondary processing capacities.

Naturally, it was not possible in Yugoslavia to completely coordinate production continuity of petroleum products with the changing structure of seasonal construction, so that it was necessary to export seasonal surpluses and import deficit quantities at other times.

The following table presents the product mix situation in 1978:

Product and Consumption of Petroleum Derivatives in Yugoslavia in 1978 (in thousand tons)

1) Proizvod	2) Proizvodnja	%	3) Potrošnja	%	4) Razlika
Motorni benzin 5)	2 301	17,2	2 339	15,2	— 38
Mlaz. gor i petrol. 6)	299	2,2	4 754	2,2	— 33
Dizel gorivo i ulje za lož. za domaćinstva 7)	4 268	32,0	332	30,8	— 486
Ulje za ložење 8)	4 638	34,7	5 855	37,9	—1217
Ostali proizvodi 9)	1 847	13,9	2 154	13,9	— 307
Ukupno 10)	13 353	100,0	15 434	100,0	—2081
Vlastita potrošnja rafinerija 11) – ulje za ložење	865				

Key:
1. Product
2. Production (percent)
3. Consumption (percent)
4. Difference
5. Gasoline
6. Jet fuel and kerosene
7. Diesel fuel and home heating oil
8. Other heating oils
9. Other products
10. Total
11. Internal consumption at refineries--heating oil

Internal consumption of heating oil by refineries amounted to 865,000 tons, which meant about 6 percent of the total oil processed.

It should be mentioned that the category of other products included primarily gasoline, with consumption of 548,000 tons, and bitumen, with 651,000 tons of consumption.

As developed until 1975, refinery capacities were not completely able to satisfy demand either in terms of overall volume of production or in terms

of product mix, even though in terms of the quality of the products produced the refineries had achieved the leve s of Western European refineries.

Thus, it was with good reason that the task of increasing primary processing capacities was undertaken in all refineries, along with the construction of all necessary facilities for secondary processing into the needed finished products. The new primary processing facilities, along with those in existence, will provide the capacities needed for the country's demand until 1985 according to projections, while the secondary facilities will enable rational utilization of crude oil not only from the point of view of provision of higher quality products, but also in attaining high-quality production as well as assuring the required quantities of raw materials for the growing needs of the petrochemical industry.

The situation regarding capacities of primary and secondary processing of crude oil in Yugoslav refineries prior to the expansion is shown in the following table.

A Survey of Oil Refining Processes in Yugoslavia Prior to Expansion (in tons per day)

	1) Proces	2) Bosanski Brod	3) Lendava	4) Novi Sad	5) Pančevo	6) Rijeka	7) Sisak	8) Zagreb	9) Ukupno
10)	Primarna destilacija 1	438	1 800	1 800	4 250	1 370	1 450	—	—
11)	Primarna destilacija 2	320	—	—	—	455	2 000	—	—
12)	Primarna destilacija 3	1 325	—	—	—	4 250	1 050	—	—
13)	Primarna destilacija 4	5 500	—	—	—	7 600	6 400	—	—
14)	Ukupno	7 580	1 800	1 800	4 250	13 675	10 900	—	40 005
15)	Vakuum destilacija	180	—	—	—	—	—	160	340
16)	Visbreaking	—	—	—	2 200	1 120	—	—	3 320
17)	Katalitički kreking	—	—	—	—	—	800	—	800
18)	Hidrokreking	1 050	—	—	—	—	—	—	1 050
19)	Reforming 1 (s desulfuracijom)	880	—	—	600	500	400	—	5 500
20)	Reforming 2 (s desulfuracijom)	—	—	—	—	1 560	1 560	—	
21)	Izomerizacija C_5—C_6	—	—	—	—	600	—	—	600
22)	Destilacija plinskog ulja	—	—	—	700	350	370	—	1 420
23)	Redestilacija primarnog benzina	—	—	—	110	—	45	—	155
24)	Oksidacija i ekstrakcija merkaptana	560	—	—	600	360	80	—	1 600
25)	Duvanje bitumena	100	—	—	—	130	150	—	380
26)	Proizvodnja mazivih ulja	—	—	—	—	600	—	150	750
27)	Hidrorafinacija mazivih ulja	—	—	—	—	700	—	—	700
28)	Proizvodnja aromata	—	—	—	—	1 300	—	—	1 300
29)	Priprema ukapljenih plinova	—	—	—	430	120	70	—	620
30)	Koking	—	—	—	—	—	800	—	800
31)	Kalcinacija petrolkoksa	—	—	—	—	—	240	—	240

[key on next page]

Key:

1. Process
2. Bosanski Brod (refinery)
3. Lendava
4. Novi Sad
5. Pancevo
6. Rijeka
7. Sisak
8. Zagreb
9. Total
10. Primary distillation 1
11. Primary distillation 2
12. Primary distillation 3
13. Primary distillation 4
14. Total
15. Vacuum distillation
16. Viscosity breaking
17. Catalytic cracking
18. Hydrocracking
19. Reforming 1 (with desulfurization)
20. Reforming 2 (with desulfurization)
21. C_5-C_6 Isomerization
22. Desulfurization of heating oil
23. Redistillation of primary gasoline
24. Oxidation and extraction of mercaptan
25. Bitumen blowoff
26. Production of lubricants
27. Hydrorefining of lubricants
28. Production of aromatics
29. Preparation of liquid gas
30. Coking
31. Calcination of petroleum coke

It should be noted that the production of lubricants at the Rijeka refinery includes solvent refining, deparaffination, deasphaltization, deoiling and paraffin manufacture. Also, the production of lubricants at factories in Modrica, Belgrade and Maribor provides another 400 tons/day. The production of aromatics at the Rijeka refinery includes hydrodealkylation aromatic extraction, and supercracking of C_8 aromatics.

As can further be noted from the table above, the refineries at Lendava, Novi Sad and Zagreb at present lack conversion capacities, so that in calculating the ratio of secondary to primary production, they were not included in the calculations. Furthermore, at the Pancevo refinery viscosity breaking (of 2,200 tons/day) has recently been considered to be primary distillation, so therefore it too was not entered into the calculation of these ratios.

Thus, if for the refineries at Bosanski Brod, Pancevo, Rijeka and Sisak we count conversion capacities (viscosity breaking, catalytic cracking, hydrocracking, reforming and isomerization), then the sum amounts to 9,070 tons/day, while the primary processing capacities of these refineries totals 36,405 tons/day, so that the secondary processing capacities amounted to 24.9 percent of the primary capacities. By Western European standards, that is a favorable situation. The situation for individual refineries is, however, varying. For example, for Bosanski Brod it is 25.4 percent, for Pancevo 14.1 percent, for Rijeka 23.3 percent, and for Sisak 25.3 percent.

The reason for these relatively high ratios is found in the circumstance that when the refineries were being built, secondary capacities were calculated on the basis of inevitable expansion of primary processing

capacities for processing crude oil, so that the conversion capacities were built in anticipation of the expected future expansions of capacities.

Parallel with expanded capacities for primary crude-oil processing, however, individual refineries are also building such new secondary processing facilities that will diversify the technological structure of processing, thus contributing to even better and more rational utilization of crude oil, improved provision of higher quality products, and in the last analysis improve the economic results of crude-oil processing.

Of course, if the refineries in the process of expanding their capacities for primary crude-oil processing had not also built suitable new facilities for secondary processing, then the relationship of secondary to primary processing would have fallen at Bosanski Brod to 14.1 percent, at Pancevo to 16.8 percent (including viscosity breaking), at Rijeka to 13.1 percent, and at Sisak to 13.6 percent.

Such a high relationship would not correspond to modern views on oil processing either in terms of capacities or product mix.

The situation concerning the construction of new facilities at individual refineries is as follows:

At Bosanski Brod, other than the construction of installations for primary crude-oil processing (for 3 million tons/year) and vacuum distillation (for 1.2 million tons/year) there will be construction of the following secondary oil-processing facilities:

For reforming (of 540,000 tons/year) with hydrosulfurization, desulfurization of jet fuel and heating oil (totaling 478,000 tons/year), processing of oil with amines (totaling 100,000 tons/year), gas refining (26,200 tons/year), deasphaltization with propane (150,000 tons/year)--for the needs of the Modrica oil plant, and a sulfur plant (10,700 tons/year).

At the Lendava refinery, other than primary oil processing of 2 million tons/year, facilities for reforming and desulfurization of intermediate distillates in suitable quantities are being built. Recently the methanol plant was completed, with 165,000 tons/year capacity, based on processing of primary gasoline or natural gas.

At the Novi Sad refinery, construction is under way of secondary facilities related to the newly built primary processing facilites (for 2 million tons/year), including hydrorefining of gasoline, reforming, hydrorefining of jet fuel and heating oil, and treatment of liquid gas. In the Uljar II installation, there are facilities for processing petroleum distillates (88,000 tons/year) and hydrorefining of lubricating oils and their blends.

At the Pancevo refinery, construction is in progress of a catalytic cracking facility (for 21,000 tons/day) with corresponding final process equipment. Similar progress is being made at Rijeka, where a catalytic cracking installation for 30,000 tons/day is being built, while at the Sisak refinery, along with the expansion of coking operations, a catalytic cracking facility for 10,000 tons/day and an aromatics extracting facility (for a total of 300,000 tons annually) are being constructed.

Difficulties related to the financing of installations that have been started, in order to complete them and initiate their operations as primary facilities very uncertain. That situation is worsened by the constant uncertainties concerning acquisition of the needed amounts of crude oil through imports.

Difficulties related to crude-oil acquisition, restrictive administrative measures for savings in petroleum products and the like result in the fact that the refineries will not receive crude-oil quantities in relation to their capacities, which in turn will bring poorer utilization of the available facilities for primary and secondary processing of crude oil.

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